

III

D I A R Y

of

WM. BARCLAY PARSONS

Chief Engineer, Rapid Transit Commission,

From the beginning of work, March 26, 1900, to his resignation  
as Chief Engineer, December 31, 1904.

M A R C H 26, 1900.

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Work begun on Bleecker Street, just east of Greene Street, at 8 A.M., Chief Engineer striking first three blows, followed by C. W. Hendrick. Contract let to James Pilkington for lowering the Bleecker Street Sewer, Greene to Elm St., for \$13,100 for 200 Ft. at rate of \$14.64 per ft.

Received from Mr. Orr Commissioner of Sewer Kane's letters calling for inspectors to be nominated by the Sewer Department; also other conditions. Notified Loomis that matter would be attended to within a day or two.

Rice ill in Boston.

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M A R C H 27, 1900.

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Inspected Bleecker Street excavation in A.M. with John B. McDonald, and urged on him the advisability of beginning with the Canal Street Sewer as soon as possible.

*ms.*



M A R C H 28, 1900.

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In morning examined Bleecker Street work. Found contractor erecting the cableway trench, about 4 ft. deep, soil good sand. Pavement is granite on concrete foundation- fair condition.

Contractor informed me, in reply to question, that Commissioner of Highways had not sent him any permit, newspapers to the contrary notwithstanding. I notified him that there were no politics in the work, and that the Commission would support him in any attempt to keep politics out. He told me he would proceed in that way and was paying no attention to letters from ward politicians.

1:30 had a conference in Belmont's office with Belmont, Baldwin, Oakman and Vanderbilt. Discussed the desirability of making 42d St. line two tracks, and building two tracks for express service on Broadway. Also an east-side line from 42d St. to 110th St., and the location for a line to Brooklyn. Consensus of opinion seemed to be that best route would be from Bowling Green under Whitehall Street, Atlantic Avenue to Long Island Railroad. Gave them views as to connection with New York Central at Inwood, New Haven at Southern Boulevard, and Harlem at 42d Street; also the idea of omitting uptown sta-

March 28,- 2.

tions and transferring with surface lines--all of which seemed novel and was approved. They seemed to be inclined to doubt the wisdom of the intricacy of the Post Office loop, especially in view of the Brooklyn connection.

Metropolitan Traction Company notified me through Reed that Contractor had failed to give them notice on Bleecker Street.

*H.B.C.*

*H.B.C.*

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M A R C H 29, 1900.

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Meeting of the Commission at 3 P.M. Received informal instructions to proceed with Brooklyn line, via Atlantic Avenue, in conformity with suggestions from Baldwin and Belmont.

At the conclusion of meeting, explained to Orr, Rives and Langdon proposed change on Broadway, and the omission of two tracks on 42d Street.

*H.B.C.*

M A R C H 30, 1900.

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In afternoon walked over the line of the Canal Street Sewer with Contractor Pilkington. As the result of the discussion, it is quite clear that it is desirable to eliminate the street railway tracks on Oliver and Worth Sts., and also to put in a false bottom to the Canal Street Sewer, from Canal Street south, so as to permit the work to be done from both ends. While studying the thing at home in the evening, it occurred to me that this could be done with a temporary wooden floor.

*H.O.P.*

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M A R C H 31, 1900.

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In A.M. had Hendrick sketch out Canal St. Sewer construction and submit the same to Mr. Loomis, Loomis reporting that it appeared satisfactory. Also had Carr call on Metropolitan people in regard to abandoning tracks on Oliver and Worth Streets, which he reported could be done.

In afternoon walked over Atlantic Avenue route with Perrine.

*H.O.P.*

A P R I L 2, 1900.

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Explained to Rives that Post Office loop was under consideration for revision by contractors.

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A P R I L 3, 1900.

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In morning stopped at Bleecker Street Sewer. Found Traveler up and working, and work progressing satisfactorily.

Hendrick notified me that Loomis approved false bottom in Canal Street Sewer.

Took up question of staff with Civil Service Commission through Rice.

Towle telephoned that Mc Donald would pay one-half the expense of reproducing sewer plans. Bushnell reported that sewer drawings would cost \$31 each for edition of 300- 250 loose 50 copies bound.

*H.B.O.*

A P R I L 4, 1900.

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Set William Phelan to work as Inspector; recommended by Loomis; rate \$4 a day.

SooySmith called and requested plans be prepared for dividing the Boulevard section in two. Referred legal persons involved to Shepard.

Towle called and confirmed statement in regard to Mc Donald paying one-half of sewer plans

Mc Donald called urging Craven's appointment.

*A.B.C.*

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A P R I L 5, 1900.

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Examined Bleecker Street work in A.M. Found top of sewer exposed.

In P.M. meeting of Rapid Transit Commission.

*hmr*

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A P R I L 6, 1900.

Discussed Boulevard plans with SooySmith in A.M.

Alexander from King's Bridge called in regard to change of station at Hyatt Street, he suggesting change to Ashley Street; and also his proposition to sell terminals at King's Bridge, he having in mind a 5-acre tract which he thought could be secured at about \$15,000 an acre.

*A.B.C.*

A P R I L 7, 1900.

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Discussed with Rice and Hendrick the construction in regard to sewers, laying down the general proposition that it was our intention to replace work merely as good as that which we had found, and not to go in for new improvements.

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*MR*

A P R I L 8, 1900 (Sunday).

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In afternoon walked with Rice from King's Bridge to 181st Street, with the view to changing the line to 10th Avenue, and the possibility of making a New York Central connection through Inwood, both of which are thoroughly feasible. Also examined the proposed site for terminals as suggested by Alexander.

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*MR*

A P R I L 9, 1900.

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Pilkington called and notified me that the contract of the Canal Street Sewer had been awarded to him, at following rates :

900 ft. of Wooden Barrel	at \$17	
1197 " " Flt Top Sewer	" 22	
1837 " " Deep Trench	" 26	
<u>1016 " " Ordinary Trench</u>	" 20	TOTAL, - \$109,716
4950		

Mr. Pilkington said he had reduced his bid \$6,000 as the result of our walk over the route.

Pilkington told me of a conversation with Loomis in which he (Pilkington) made suggestions as to connections by means of Drop Wells.

Told Pilkington I would protect all sub-contractors up to the point of doing at least as good work as that which was found.

Conferred with Shepard in regard to decision of Civil Service Commission about not holding personal examinations below grade of Assistant Engineer. Shepard suggested having three grades of Assistant Engineer.

*H.B.P.*

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A P R I L 10, 1900.

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Instructed Rice to proceed with scale of examinations for three grades of Assistant Engineer.

*H.B.P.*



A P R I L 11, 1900.

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Met Charles Stewart Smith at his office, corner Worth and Elm Streets, and inspected his building with a view of diminishing the damage to his property by location of station.

Wm. H. Baldwin called in morning and proposed locating the Brooklyn line on Joralemon St., and not Atlantic Avenue, and also informed me that there was a possibility of making arrangements with the Pennsylvania Railroad to build a tunnel from their terminus to Bowling Green.

Conferred with Wanamaker, Golding and Morris K. Jesup in regard to Wanamaker acquiring the block between 8th and 9th Sts. and erecting thereon an extension of his store in connection with the Rapid Transit Station.

*N.B.*

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A P R I L 12, 1900.

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General Routine work.

*N.B.*

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A P R I L 13, 1900.

Commission meeting for discussion of Boulevard changes.

Mr. Mc Donald informed me that the following sub-contracts had been let :

Following contracts for material and construction  
awarded, subject to execution of final contracts.

FOR WATERPROOFING:

The Sicilian Asphalt Paving  
Co., Times Building, New York.

FOR STRUCTURAL IRON AND STEEL:

The Carnegie Steel Co., Ltd.,  
71 Broadway, New York.

FOR PORTLAND AND NATURAL CEMENT:

The United Building Material  
Co., 621 Broadway, New York.

FOR CONSTRUCTION OF SUBWAY:

Section 1. Post Office loop to )  
          <sup>centre</sup> Chambers Street. )  
" 2. Centre Chambers )  
      Street to centre )  
      Great Jones Street.)

The Degnon-McLean  
Construction Company,  
1 Broadway, New York.

Section 7. Portal of tunnel at )  
          103d St. centre )  
          110th St. (Lenox )  
          Avenue). )  
" 8. Centre 110th St. to )  
      centre 135th St., )  
      plus 100 feet. )

E. J. Farrell,  
Hamilton Bank Bldg.,  
New York.

Section 9. Centre 135th St. )  
          plus 100 feet to )  
          West Side (Building )  
          line) Brook Avenue. )

John C. Rodgers,  
151 St. & Harlem River,  
New York.

Section 11. Centre 104th St. to )  
          south side (build- )  
          ing line) 125th St., )  
          plus 10 feet. )

John Shields,  
Flemington, N.J.

Section 13. North side 133d St.)  
          to centre 181st St., )  
          plus 100 feet. )  
" 14. Centre 181st St. )  
      plus 100 feet to )  
      Hillside Avenue. )

L. B. Mc Cabe,  
Baltimore, Maryland.

A P R I L 14, 1900.

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Absent from City--Princeton.

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A P R I L 16, 1900.

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Mr. Mc Donald called in relation to 42d St. work. Discussed the advisability of suspending the letting of this sub-contract until arrangements with the New York Central had been taken up.

He informed me that the price for the steel contract was \$65 a ton, less \$5 rebate, f.o.b. New York.

Price for cement was \$1.87 for Portland, and 87 cts. for Natural; the cement to be delivered on the work; the Contractor supplying the requisite bins and sheds for its storing at the mill and in New York.

He also stated price of erection of Elevated Railroad work at \$12 per ton, with cartage extra.

In afternoon examined Bleecker St. Sewer with Rice.

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A P R I L 17, 1900.

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Routine work.

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*H.B.C.*

A P R I L 18, 1900.

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In afternoon, Frothingham, -representing Manufacturers' Committee of Brooklyn, -Rice and myself went to Brooklyn, and walked over the proposed Joralemon Street route to City Hall. This route possesses many advantages over the Atlantic Avenue route, in that a shaft can be conveniently placed at water's edge, and line comes out back of City Hall.

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A P R I L 19, 1900.

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Commission meeting.

Examined Bleecker Street Sewer with Commissioner Rives.

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A P R I L 20, 1900.

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Routine work.

Towle informed me that Loomis wanted a connection in the Bleecker Street Sewer through the railway. Declined to grant request.

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*H. A. B.*

A P R I L 21, 1900.

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Routine work.

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A P R I L 23, 1900.

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Rice notified me that Civil Service Commission stated that Chief Draftsman could be appointed under title of Inspector of Designs.

Swensen (Carnegie) called and stated that his firm was having great difficulty in coming to a satisfactory agreement with Mc Donald in regard to details. He understood that other sub-contractors were objecting to the terms of payment, and was anxious that I should in some way interfere.

*H.B.P.*

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A P R I L 24, 1900.

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Conference with Swensen, SooySmith and Deyo in regard to arranging for delivery of steel- Swensen holding out for specific points for delivery, Belmont for the reverse. Had further conference with Swensen and stated that I thought both positions were unreasonable.

*H.B.P.*

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A P R I L 25, 1900.

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Informed by Deyo that agreement would probably be reached with Carnegie to-morrow.

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A P R I L 26, 1900.

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Routine work.

Rapid Transit meeting in afternoon.

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A P R I L 27, 1900.

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Mr. George W. Hamilton called, the man that Mr. Starin had instructed me to propose for a position on the Rapid Transit staff.

Mr. Hamilton explained that he was the assemblyman who introduced the bill. I explained to him the situation in regard to examinations, and that we had no positions to give away, but that I would do what I could if a vacancy occurred with the contractors.

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*A.B.C.*

A P R I L 28, 1900.

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In morning, routine work.

2 P.M. went with Mc Donald, Deyo, E. J. Farrell and Bensen on Dock Department launch. Examined piers on East River as high as 42d St., and afterwards on North River as high as Fort Washington. Most desirable pier on East River, in Mc Donald's estimation, seemed to be near Brooklyn Bridge belonging to Clyde Line. On North River, piers and bulkheads can be obtained at almost any desired locality north of 42d Street.

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A P R I L 30, 1900.

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Spent morning at 320 Broadway arranging about offices and expediting the preparation of drawings.

Afternoon Mr. Belmont called with Mr. Bryan, and introduced him.

Rice absent in Boston.

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M A Y 1st, 1900.

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Deyo called and submitted plan for change of concrete in roof.

10:30 met delegation from Brooklyn in Mr. Orr's office in regard to a possible route. They insisted that the Brooklyn



M A Y 1st (Continued)

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end should be close to City Hall, and proposed connection with City Hall in New York, but on latter point were not insistent.

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M A Y 2, 1900.

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Met in Mr. Orr's office two gentlemen representing the Steinway system of railroads. Recommended them to employ J. V. Davies.

Davies called with borings of old Long Island Railroad scheme, he stating that rock in Brooklyn differed radically from rock in New York, and their experience at Blackwell's Island showed that there was an abrupt transition in the middle of the river, the transition being marked by a layer of decomposed rock; that he had put down three borings in the river at a cost of \$5,000.

Spent afternoon in upper office.

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*H. A. P.*

M A Y 3, 1900.

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Met at 9 o'clock at Plaza Hotel, Belmont, Mc Donald, Soby-smith, Deyo, and Bryan. Drove over West-side line to King's Bridge, thence to Jerome Park Reservoir, Bronx Park, and back over East-side line to junction. Suggested to Belmont and Bryan advisability of omitting 129th St. station and transferring passengers by surface lines.

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M A Y 4, 1900.

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Rapid Transit meeting in afternoon, at which large delegation of Brooklyn people were present; the Committee of Citizens having agreed on the Joralemon Street route, although some people of South Brooklyn present urged the tunnel to be built to Hamilton Avenue.

Received a letter from Mr. Kane addressed to Mr. Orr insisting upon the appointing of inspectors. Referred Commissioner Kane's letter to Mr. Shepard.

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M A Y 5, 1900.

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Absent from city (in Washington).

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M A Y 7, 1900.

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Routine work in morning at 320 Broadway.

Met Mr. Deyo at 11 o'clock. Discussed steel contract, in which I declined to accede to the request of the Carnegie Steel Company that I should be made one of the Board of three to settle disputes on the sub-contract.

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M A Y 8, 1900.

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Stopped at Bleecker Street Sewer on the way down. Found the water pipe broken; large amount of water flowing in trench. No apparent damage done, but ordered trench excavated back when the flood was stopped, to see to the packing of the arch, and that the arch itself was still solid.

Had meeting with Bryan who proposed, instead of a Post Office loop, a 2-track loop via Vesey Street, West Street, Battery Place, and Broadway, trains running always in the same direction, and in addition a large storage yard in West Street. Conferred with Rives, who agreed with me that the plan was not satisfactory.

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M A Y 9, 1900.

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320 Routine work.

Mc Donald called at 22 William in regard to beginning work on Broadway and 156th Street, and also to explain his difficulties with the Carnegie Steel Company with whom he was having great difficulty to conclude agreements. Explained to him the suggestion for the Cooper-Hewitt overhead wire tramway system. Issued permit for beginning work at 156th Street and Broadway.

*H. D. B.*

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M A Y 10, 1900.

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Routine work in morning, 320 Broadway and 22 William St., and examined Bleecker Street construction and also excavations begun on Oliver Street.

Afternoon, Rapid Transit meeting held to discuss Brooklyn extension, at which the arguments in favor of Joralemon Street had decidedly the best of it. After meeting examined Bleecker Street sewer with Commissioner Rives.

*H. D. B.*

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M A Y 11, 1900.

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Called at Carr and Hendrick's office. Gave Carr instructions to have line established and to cross-section his whole division at least every fifty feet.

Cautioned Hendrick not to allow too much of the trench to be opened for sewer work, without a brick bottom, as otherwise possible damage might occur in case of flood.

Examined Bleecker Street Sewer and cautioned inspector about allowing men to walk on freshly laid invert so as to loosen bricks. Found the work in charge of two inspectors of Building Department.

*H.B.P.*

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M A Y 12, 1900.

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Routine work in morning. Moved to 320 Broadway in afternoon.

*H.B.P.*

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M A Y 14, 1900.

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Began work at 320 Broadway.

Examined work on Oliver Street and found men at work erecting traveler. Found bracing between sheet-piling very light. Cautioned inspector to permit no excavation to be made until proper braces had been put in, as soil was very bad. Also cautioned him to examine abutting buildings for possible cracks, which he said he had done, and pointed out a new building then in course of erection, badly settled, and certain lintels over the windows already cracked. He stated that the construction was very flimsy, and that the Building Department had already interfered.

In afternoon attended the celebration at 156th Street. Went up in the train with Bryan and explained to him objections to his proposed loop, but suggested that if he was still of the opinion favoring it, he had better have the plan worked out in detail and submitted with an estimate of the cost.

*H.B.P.*

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M A Y 15, 1900.

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Examined Bleecker Street sewer on the way down town. Found work progressing and in much better condition than at last inspection. Trench opened as far as the Broadway line.

*H.B.P.*

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M A Y 16, 1900.

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With Rice and Hendrick examined Oliver Street sewer. Found new building previously referred to very badly cracked, the front wall bulging and apparently separating from the main building. Sent for building inspector Mr. Blackledge, who met Hendrick in the afternoon and stated that an "unsafe" order had been placed on the building on May 11, and that the damage to the building had occurred previous to our excavation which did not affect it. Cautioned Hendrick about being very careful with sheet-piling of Oliver Street trench and of examining all buildings.

Had a conference in afternoon with Deyo in regard to work of column location for the Bronx elevated division.

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*H.B.D.*

M A Y 17, 1900.

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Stopped at Bleecker Street on way down. Found that storm during night had washed out the earth behind the sheet-piling near Broadway. Men at work straightening sheet-piling and tamping holes.

Afternoon, Rapid Transit meeting. At the meeting the Long Island City proposition was presented. The balance of afternoon <sup>was</sup> taken up with a discussion of routes to Staten Island and Jerome Valley extension.

After the meeting, on way up town, found at Bleecker



M A Y 17 (Continued).

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Street bad condition of affairs. Work in charge of an old foreman who was very much excited, and who realized that the sewer trench was subject to damage by a possible storm during the night. <sup>++</sup>The gutter was blocked. The sewage was confined to a single 6-inch pipe, at least 50 feet of trench had no invert, and with a drop of 6 feet or more. Ordered another 6-inch pipe. Had line of pipe laid from gutter so as to shoot water clear of the sheet-piling, and ordered work left in charge of competent foreman with a force of men to take care of a storm.

*A.B.B.*

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M A Y 18, 1900.

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Sent for Hendrick and instructed him that, under similar cases arising in future as described above in connection with Bleecker Street sewer, work must not be left by the inspector or the engineer until the same is amply secured for any possible damage during the night, and that all accidents must be reported immediately to head office- that he must impress upon his subordinates the sense of strictest personal responsibility.

Examined Bleecker Street work with Rice and Hendrick. Found Pilkington in charge, a new foreman in place, and a very much better condition of affairs; the invert completed to the facing of the work, and preparations being made to tunnel Broadway.

*A.B.B.*

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M A Y 19, 1900.

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A very heavy storm in morning. Arrived at Bleecker Street sewer shortly after 9 o'clock. Found a serious wash-out caused by the flow from Broadway sewer from the north striking against the sheeting at the south side of the trench, and also by the storm water from the street getting in behind the sheeting at the southwest corner of Broadway and Bleecker. Work was in charge at the time of C. W. Hendrick, Division Engineer, Marshall, the sub-contractor's foreman having left the work at about 8 o'clock. Two serious falls of earth occurred at the Broadway face, and there was serious danger of the street caving in.

At 10:05 wired Mc Donald's office the condition of affairs, stating that no representative of the sub-contractor or himself was on the ground. At 10:30 Mr. Deyo arrived, and at 10:35 Pilkington. At that time the worst of the storm was over, and steps were then taken to secure the ground. Contractor was short of tools and appliances and men, there not being even a hand pump on the work.

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M A Y 21, 1900.

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Stopped at Bleecker Street in morning and found work progressing. Conferred in afternoon with Rives, who approved of the idea of demanding Marshall's dismissal.

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*hasp.*

M A Y 22, 1900.

Stopped at Bleecker Street sewer in morning; found that the invert had not been damaged by the flood.

Examined Oliver Street sewer, and found men at work laying the stone flagging. Work progressing satisfactorily.

In afternoon Mr. Bryan called stating that he had decided to urge the construction of the Vesey Street loop, and that he had written a letter to that effect to Mr. Belmont and that an estimate of cost was being prepared. He also suggested putting in an express station at Spring Street. I told him that that was impossible on account of the width of the street. Mr. Bryan seemed to be anxious to introduce some more stations, notably one at 8th Avenue and 104th St. Urged on him the suggestion of transferring with Metropolitan Traction Company and reducing the number of stations north of 104th St. This idea did not seem to impress him favorably. Bryan seems to be working with Skitt and taking Manhattan practice as his standard. Admitted that he was not posted in regard to electricity and its possibilities.

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M A Y 23, 1900.

Spoke to Bryan on telephone and suggested that, instead of putting in an express station at Spring Street, a certain number of local trains making all the stops south of Spring Street

M A Y 23 (Continued).

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be diverted to the express lines at 14th Street and become express trains north from there.

At 2 o'clock visited Oliver Street with Hendrick to examine, at his request, a bulge in the side wall due to the ramming of the earth work against the fresh masonry. Ordered the same out, although inspector Darling thought that the bulge did not seriously interfere with the sewer.

Had the first of the staff conferences.

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M A Y 24, 1900.

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Visited Oliver Street. Found wall rebuilt. \* Work progressing satisfactorily, the first of the arches being turned.

Also visited Bleeker Street, and found that the new sewer had been built to the junction of the two Broadway sewers.

*\* Inspector thanked me for having wall repaired, and that hereafter no further work need be looked for.*

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M A Y 25, 1900.

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In morning, routine work.

In afternoon Deyo called with Mc Cabe, and stated that they wished to begin work at 135th St. at once so as to head off the 3d Avenue surface line. I promised to issue the



M A Y 25 (Continued)

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permit. Also suggested to Deyo advisability of beginning work on the Manhattan Valley viaduct foundations, and promised a permit for them. Mc Cabe wanted work staked out at 133d St., and also for the shafts at 169th and 181st Sts.

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M A Y 26, 1900.

In morning sent for Deyo and suggested that, instead of building the shaft at 181st St. in the centre of the street, to build the same on private property on one of the corners and so save ~~some~~ expense in construction. Deyo seemed to approve of the plan, and promised to submit the same to Mr. Mc Donald. Also explained to him the necessity for getting condemnation proceedings begun, and that no permit would be granted until the same were begun. Talked with Shepard over the phone, who approved of my letters to Mc Donald and Whalen in this regard.

*A.B.C.*

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M A Y 28, 1900.

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In morning went with Deyo and Mc Cabe's head man over the proposed route of the surface railways for Mc Cabe, and examined shafts and sites at 169th and 181st Sts. Theroutes for surface railways are not objectionable, Mc Cabe's man pointing out that on Boulevard Lafayette the railway could be kept on the east side of the street where there is no pavement.

Had conference with Shepard, who approved of the idea of writing a Whalen interview.

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M A Y 29, 1900.

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Saw Rives who approved interview. Submitted the same to Bishop.

Called on Bryan and lunched with him and Mc Donald and General Electric people. Talked subsequently with Mc Donald about shafts on private property, which he approved and started immediately for Whalen's office to get the data to obtain options.

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*H. B. O.*

M A Y 30 (Holiday).

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Examined Bleecker Street sewer; found trench well secured.

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M A Y 31, 1900.

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In morning general office work.

Sent Rice to attend meeting of Board of Public Improvements of the Bronx in regard to the widening of Westchester Avenue. On arrival he found that there had been a meeting previous to the hour set, at which it had been practically determined to widen the whole of Westchester Avenue. He pointed out that such a widening of the street was not necessary, but Haffen said there had been issued permits for use of the sidewalk for steps and other things which would make it too narrow a sidewalk unless the whole street were widened. Rice said that, evidently, it was a cut and dried affair to widen the street at the expense of the Commission.

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*M.B.G.*

J U N E 1, 1900.

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In morning routine work.

In afternoon went with Mr. Langdon to examine routes proposed by Mc Cabe for surface tramways. Found 137th and 138th



J U N E 1 (Continued).

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Streets both suitable, although 135th Street not suitable owing to its being the approach to the Manhattan Viaduct. Mr. Langdon approved of 158th Street and of the Boulevard Lafayette and of 165th Street.

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J U N E 2, 1900.

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Examined Oliver Street sewer with Rice.

Had talk with Mr. Franklin A. Wilcox who, with Mr. J. Clarence Davies, owns the bulk of the property between 3d Ave. and Brook Avenue. These gentlemen were bitterly opposed to widening Westchester Avenue, thinking that cutting down the sidewalks to 11 ft. will give ample sidewalk accommodation, and also ample roadway.

Had a talk with Harris of Corporation Counsel's office, who informed me that Whalen had placed the condemnation proceedings in his hands.

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*H.B.D.*

J U N E 4, 1900.

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Bryan and Deyo called in regard to Spring Street Station. Bryan also informed me that he had laid before his people a written program for the loop down Vesey Street. Found Bryan much more tractable. I told him that I could not approve of the line down Vesey Street, as it involved too great an expenditure. I believed that it would be a good thing to do at some future time, but not now. In the meantime, money could be spent to better advantage elsewhere, either from 14th to 42d Street, or an East Side line from 42d to 110th, or suggested the propriety of omitting the East Side line entirely and building up Jerome Avenue and giving the East Side line to the Manhattan Railway. He seemed much impressed with this idea.

*N.B.D.*

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J U N E 5, 1900.

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Met Hendrick at his office at 9:30, and with him made a critical examination of work at Bleecker Street, 10th St., Mulberry St., and Oliver St.

At Bleecker Street found the tunnel being driven beneath Broadway.

On Mulberry Street the Inspector showed signs of drinking. Told Hendrick to let him go when Mulberry Street work was com-

J U N E 5 (Continued)

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pleted.

In afternoon had a talk with Deyo and Bryan in which I suggested to them the use of Jerome Avenue and the abandoning of the East Side line, or, rather, the giving of the elevated portion of the East Side line to the Manhattan Railway.

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J U N E 6, 1900.

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Conference with Bryan and Deyo in regard to the changing of the West Side line north of Fort George. They both approved of the running of the line via Nagle and Amsterdam Avenues.

Deyo reported that he had a conference with Wilgus of the New York Central in regard to having a joint station with their people. Wilgus expressed surprise that Deyo had not been to see him before; the New York Central people had been expecting him.

Had a conference with Mc Cabe and Kingsley in regard to the building of the tramways on Broadway. They explained that they wanted the 135th St. tramway for the placing of 60,000 cubic yards behind the abutment of the Viaduct, and that when the filling was completed that the tramway would be taken up. Got Mr. Langdon's permission to issue a special permit.

Staff meeting at 3 o'clock.

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14030.

J U N E 7, 1900.

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Examined Bleecker Street sewer in morning.

Had a conference with Deyo in regard to change in column construction. Decided to retain the present construction, with the addition of one anchor bolt. We also discussed the use of ballast for track, and then agreed to endeavor to have a piece of experimental track laid.

Meeting of the Board at 3.

After meeting examined Oliver Street in company with Rives, and later 10th Street sewer alone.

*H.B.O.*

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J U N E 8, 1900.

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Had a conference with Deyo with regard to roof construction along the route.

Hendrick notified me that Pilkington was ready to begin paving, and had submitted samples of paving cement. Instructed Hendrick to confer with Nicholas R. O'Connor. O'Connor called and suggested that it would be well to postpone paving for two weeks, as paving was otherwise sure to settle.

*H.B.O.*

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J U N E 9, 1900.

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Routine work in office.

Instructed Hendrick over the telephone to postpone paving on Bleecker Street.

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J U N E 11, 1900.

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Attended a meeting at Mr. Orr's office, at which were present Mr. Rossiter, of Brooklyn Rapid Transit, and Mr. Bailey.

Mr. Rossiter explained that it was necessary for Brooklyn interests that the Brooklyn passengers should be carried through to New York for one fare--it was not so necessary that they should be given a ride in New York. His plan was to bring a line from somewhere in the neighborhood of the City Hall in Brooklyn to the City Hall in New York, thence south with two tracks--one for local and one for express--to the neighborhood of Battery Place, and thence back to Brooklyn. He would like to use Broadway, but supposed that Broadway was reserved for the New York line. Mr. Orr suggested using the Broadway tracks jointly for both companies, which Mr. Rossiter and I both objected to as impracticable.

Mr. Rossiter said that the B.R.T. cars ran over the Bridge at 12 seconds headway and carried 280,000 people both ways, or 42,000 at the maximum hour between 5 and 6.

Showed Mr. Orr Senator Platt's letter.

*H.B.*

J U N E 12, 1900.

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Routine matters.

Called on Bryan and Deyo in afternoon and submitted to them the proposed changes of the 14th St. Station, which they approved.

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J U N E 13, 1900.

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Examined the work at 157th Street and 133d Street with Value. Found Contractor had exposed the rock. Also found that they were piling the debris in the centre of 11th Ave. making a spoil bank for this material subsequently to be used for backfilling. Piles occupied at least one half of the driveway, and they proposed to build a tramway between the piles and the curb. I objected, on the ground that the driveway would be too much occupied, and pointed out that they could dump their material on the unused portion of the Boulevard Lafayette just north of 158th Street.

Staff meeting in afternoon.

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*me*

J U N E 14, 1900.

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In morning with Hendrick examined the 10th Street, Bleecker and Oliver St. sewers. At Bleecker Street the tunnel had been completed and the bulkhead on west side of the street- exposed invert being laid.

Board meeting in afternoon; after which heavy rain, and I examined the Bleecker St. and 10th St. work and found the same in good order.

Instructed Hendrick to go and get Mr. Bensel to examine Pier 34 with him to approve of proposed changes.

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J U N E 15, 1900.

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Received call from Bryan and Deyo giving me letter from Mc Cabe to Mc Donald notifying him that, under orders from Commissioner Keating, the police had stopped the work of laying the tramway on the Boulevard Lafayette. Had conference with Shepard who dictated letters for Mr. Orr to sign addressed to the Police Board and Corporation Counsel. Told Bryan to get Mc Donald to write an official letter.

Bensel notified me over the telephone that the work, as proposed by Hendrick at Pier 34, was satisfactory to him.

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*AmE*



J U N E 16, 1900.

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Examined Oliver St. sewer with Hendrick.

Learned that there was some misunderstanding in regard to the stoppage of the work at 157th St., that the police had not acted. I telephoned Deyo to order Mc Cabe to go ahead. Went with Value to the ground and found that the police had refused to obey Commissioner Keating's orders, and that Keating had then come on the ground himself and ordered the work stopped. Explained the law to Value and Mc Cabe, and directed that work on the tramway should proceed. Had a talk with the police captain, who stated that he would not interfere without receiving written orders from the Chief.

Blasting had begun in the excavation on the 15th.

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J U N E 18, 1900.

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Value reported that Shields had begun work at 120th St.; and that work was proceeding uninterruptedly on the tramway.

Had a conference with Belmont, Bryan and Mc Donald in Belmont's office in regard to the extension to Brooklyn; connection with the Harlem Railroad at 42d Street, and the change from the East Side line to the Jerome Valley. Urged upon Mr. Belmont to decide in regard to 42d Street, as that was the key to the whole upper situation. Also advised him to prepare estimates with a map of whatever route they wanted south of City Hall.

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*ind*

J U N E 19, 1900.

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Examined 22d Street sewer. Found but 150 ft. opened up, and part of the sewer arch removed. Soil very poor, with boulders.

Examined 10th Street with Hendrick. Found sewer connected through under Broadway. Later, examined Bleecker Street; found the filling had been put in place under Broadway, and work at the east end progressing satisfactorily.

Reported to Shepard about stoppage of the work at Boulevard Lafayette and how it had been resumed. Also conferred with him about Muller.

Schneider called during the day, and, after discussion with St. John Clarke and myself, recommended that the present detail of connecting column footing be retained.

Value reported that work had not been stopped on Boulevard Lafayette.

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J U N E 20, 1900.

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Examined Oliver Street sewer. Found work progressing satisfactorily.

Staff meeting in afternoon.

Saw Shepard in regard to the acquisition of the abutting easements, and he informed me that he had made up his mind that the best thing to do was to go ahead and condemn.

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*me*

J U N E 21, 1900.

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Examined work at 157th Street, at 133d Street, and at 120th Street, with Rice and Value.

Rapid Transit meeting in P.M.

Advised by Mr. W. B. Read that the Metropolitan Traction Company contemplates extending their line on Broadway and King's Bridge Road within the next two or three months. Expect to make the regular conduit construction as far north as the Harlem Ship Canal, and overhead trolley from there on.

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J U N E 22, 1900.

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Went with Mc Donald and Deyo over the proposed change at Lenox Avenue and Jerome Avenue. Mc Donald decidedly in favor of the change and opposed to building on the other route if it can be avoided. Suggested to him a line via Cromwell Avenue, but he proposed continuing along Exterior Street and then under Central bridge to Old Jerome Avenue. We then examined together the work on the Boulevard, and, with Farrell, the proposed work in Central Park. At 168th Street he suggested placing the elevators at the end of the triangle between King's Bridge Road and Broadway.

Value ascertained the following statistics in regard to the Manhattan elevators at 116th Street: There are four

J U N E 22 (Continued)

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elevators of the hydraulic type and slow running. The actual capacity of each elevator is 15 people, in addition to the operator, although 17 can be squeezed in, but such is against the rules. Capacity in pounds 2500. Actual number of people moved in two hours, one way, 7,000. Size of the elevator 6 ft. 5 square, in the clear.

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J U N E 23, 1900.

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Routine work.

Inspected Oliver Street in afternoon. Found that some one had broken a hydrant which had washed away part of the street, and Pilkington had intended to work till late at night in order to complete the sewer past the break.

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J U N E 25, 1900.

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Called with Rice on the Civil Service Commission. Saw Phillips in regard to paying the inspectors.

Brown, of the Otis Elevator Company, called and suggested as a good size elevator one 9 ft. by 13-1/2 ft. long; although he preferred one 10 x 12 if space could be secured. Clearance between two elevators to be 20 inches. Such an elevator would cost to complete from \$12,000 to \$15,000.

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*Mo*



J U N E 26, 1900.

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Routine work.

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J U N E 27, 1900.

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With Rice and Hendrick examined Oliver Street, 22d Street and 10th Street sewers.

Talked with Harris in regard to condemnation proceedings.

Scoysmith called and informed me that a committee of his people had been appointed to confer with me.

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*Mr*

J U N E 28, 1900.

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Deyo called in the morning and agreed on the location of the shaft at 116th Street to be on the outside walk of the triangle. Same to have three compartments- two for elevators, and one for stairway.

Afterwards Mr. William H. Baldwin called and I discussed with him the general situation, stating that I had been waiting for his return from Europe before taking any active measures, but that I was not satisfied with the progress of his Company--that all the important points had been left too much in doubt, and work had not begun on those parts which would take the longest to strike. Baldwin explained the



J U N E 28 (Continued)

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Pennsylvania project of a tunnel from Jersey City to Bowling Green; and then stated that he was entirely opposed to Mr. Bryan's proposition of a loop via Vesey Street and West Street, and that he would join with me in defeating it.

At 5 o'clock called on Wilgus, Chief Engineer, New York Central, and found him quite in favor of having a Rapid Transit Station in the basement of the Grand Central and with a physical connection between the outer tunnel and the Rapid Transit tracks. He also said that he was considering the advisability of changing the plans of the Grand Central, making it a right-hand station.

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J U N E 29, 1900.

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Attended meeting at 2 o'clock in Rapid Transit Construction Company's office. Present: Belmont, Oakman, Baldwin, Read, Jordan, Vanderbilt, Mc Donald, Deyo, and SooySmith. Plans for the Grand Central were laid before the meeting, and it was decided to have conference at once with President Callaway. Route south from Post Office was discussed--decided to adopt the line to Brooklyn via Whitehall Street. Baldwin and I opposed the Vesey and West Street line, which was voted down. Discussion then had on the Post Office loop. Various plans were submitted, which I objected to, and then I proposed

to maintain the loop for the local tracks, but have a stub-shifting track for the express trains. This was adopted.

It was also decided to arrange if possible with the Manhattan Railway for the operation of the East Side line east of Third Avenue, and then to request the Rapid Transit Board to hold in abeyance the line between Lenox Avenue and Third Avenue, and to make the new crossing of the river directly north from Lenox Avenue.

*H.B.G.*

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J U N E 30, 1900.

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Routine work.

Ordered plans begun on change of loop.

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J U L Y 2, 1900.

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Had a talk with Deyo in regard to the question of extras. Suggested that he think over the matter as to what should constitute increase or decrease in the contract price, and that both he and I should notify each other as to whatever we considered changes of a financial bearing.

Informed Deyo that I would make a change on Lenox Avenue by shifting the tracks to the eastward so as to clear the trolley road; that I understood from Farrell that it would decrease the cost about \$20,000. If that was the case, I thought that a corresponding deduction should be made.

Bryan called, and he seemed very much cut over the action of the Committee in regard to making the loop change during his absence.

*Wm*

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J U L Y 3, 1900.

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Examined the work at 157th St. and 168th St. At latter point found work on the shafts had begun, the rock being close to the surface.

Had a conference with Mr. Callaway in his office, at which were present Messrs. Belmont, C. Vanderbilt, Deyo and Wilgus. Mr. Wilgus thought that the Grand Central connection was a desirable thing, but they would have to get the consent of the New York Central Board of Directors. The only objec-

J U L Y 3 (Continued)

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tion that he could see was to utilize space which they may require for their use subsequently. It was generally agreed to refer the matter to the three Chief Engineers to decide on the plan. Immediately after the conference a meeting between Wilgus, Deyo and myself was held, Wilgus and I favoring a 4-track on level with island platforms. I suggested to meet Mr. Callaway's point that the Rapid Transit work should be located as far to the eastward as possible so as to leave a space to the east for use by them. This Wilgus thought would meet his point entirely. Wilgus promised to look up the question as to changing the Harlem Railroad from left to right hand, and to report to Deyo and myself. We then separated, Deyo agreeing to work up a suggested plan for a double deck station, and I for all on the level.

*H.B.B.*

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J U L Y 5, 1900.

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Examined Oliver and Centre Street with Hendrick.  
Staff meeting.

*H.B.B.*

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J U L Y 6, 1900.

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Carr reported that he had seen Birdsall in regard to the water main on Elm Street. Birdsall reported that between Great Jones and Houston Streets the same would have to be maintained alive until the time for changing it into its position in the pipe gallery had arrived when it could be killed. South of Houston Street the pipe could be killed during the whole period of construction. Birdsall said that he thought that it would be necessary to lay another 12-inch main on the east side in order to avoid cross house connections over the top of the tunnel.

Called on Mr. Orr and explained to him proposed contractor's changes at the Post Office loop, and that the Brooklyn route would probably come up at the next meeting of the Board. Also explained to him what was being done at 42d Street, which he approved of most highly; also as to Jerome Avenue, which he said he would think over.

Deyo and Bryan called with respect to a new loop at the Post Office, by which all the tracks are kept up on the same level, the transfer being made by grade crossings in the same direction.

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J U L Y 7, 1900.

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With Rice and Value examined the work at 120th St. and at 157th Street, and the shaft at 168th. At 168th drills were first being set up. Gave orders to move the shaft 3 ft. farther south.

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*W.B.*



J U L Y 9, 1900.

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Attended meeting at 10:30 Construction Company's office.  
Present: Belmont, C. Vanderbilt, Jordan, Bryan, Deyo and  
SooySmith.

Submitted revised Post Office loop, which was adopted.

Discussed line to Brooklyn via Joralemon Street to Flat-  
bush and Atlantic Avenues, and with branch to South Ferry.  
Adopted.

Discussed the Lenox and Jerome Avenue extension, with the  
possibility of using a draw bridge instead of a tunnel. Post-  
poned in order to get statistics in regard to opening of  
bridges.

In afternoon had a conference with Wickersham, Deyo and  
Evans in regard to writing letters to the Board for changes in  
the Station length, Spring Street sidetrack, and Post Office  
Loop which had been approved at the morning meeting.

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J U L Y 10, 1900.

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Had a conference with Mr. Orr about getting a quorum of  
six for Thursday's meeting to pass Brooklyn extension.

Terry and Tench called, directing my attention to diffi-  
culties in erecting elevated railroad- about support for lon-  
gitudinal girders.

Worked late with Mr. Shepard drawing resolution for  
Brooklyn extension.

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H.B.B.

J U L Y 11, 1900.

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Conference with Mr. Orr. Mayor declined to attend  
Rapid Transit meeting. Notified Mc Donald to this effect.  
Staff meeting.

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J U L Y 12, 1900.

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Submitted to Bryan and Deyo a suggestion for omitting the little flight of steps in the stations by sloping the floor, which was approved by them.

Rapid Transit meeting in the afternoon, at which it was decided for me to encourage the contractors on the Jerome Ave\_nue line, but with the understanding that proper assurances must be given that the people on the east side will be as well taken care of, if the old crossing at the Harlem River is omitted, as they would be if that were constructed.

Had a talk with Loomis over the telephone in regard to 110th St. sewer. He insisted that the old sewer should be broken down and filled up. I told him that the Board would pay no extra for this, but that I would endeavor to get the Contractor to do it.

*ABO*

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J U L Y 13, 1900.

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Examined Lenox Avenue with Value; also proposed site for shaft at 104th Street. Found that each station will kill 8 trees, some of these being in good order, others generally in bad condition.

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J U L Y 14, 1900.

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Routine work.

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J U L Y 16, 1900.

Klapp reported for work. Sent him out with Rice to go over the route.

Bryan called to ascertain what action the Board took in regard to the Jerome Avenue extension. I told him that the Board would not entertain a temporary or lengthened abandonment of the connection with the present East-side Route unless they were guaranteed that the people would receive at least as good treatment as they would if that connection were built--that is to say, a 5-cent fare, and as good transit facilities. I suggested to Mr. Bryan the propriety for me to call in personally some of the leaders of the district and suggest to them the getting up of a petition requesting the Board and the Contractor to take this step. Mr. Bryan submitted this proposition to Mr. Belmont, and later in the day telephoned me to proceed.

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H.B.O.

J U L Y 17, 1900.

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Examined with Hendrick Oliver Street, Centre and 22d St. sewers. Found the work at all three points progressing slowly but satisfactorily.

Deyo called and submitted a proposed location for a shaft at 181st St. running longitudinally with Broadway and against the curb. Declined to approve as blocking both crosswalks and as being longitudinal with the stratification and too close to the station platform.

Had a long talk with Mr. Rice in regard to his specific share in the work, suggesting to him that he should think it over and propose to me a scheme by which he would take up certain specific duties.

*H. D. J.*

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J U L Y 18, 1900.

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Went with Value over the work at 133d, 157th and 168th St. At 133d St. found that the foundations had been laid out on rock for the abutment, and on sand for the side walls, no tests having been made for rock. In the latter case discovered that rock was at a depth of 12 inches further down, and ordered deeper excavation to be made. Mc Cabe informed me that at 157th Street he would reach the tunnel portal in about three weeks.

Called on Bryan and went over the general arrangement of



J U L Y 18 (Continued)

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crossovers with him. He wanted station platforms made 350 ft. long, and sidings 500 ft.

Had conference with Mc Donald who agreed to my plan for location of shaft at 181st St. He also notified me that the contract had been let for the tunnel between 33d and 42d Sts. to Ira A. Shaler.

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J U L Y 19, 1900.

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Sent for W. W. Niles and submitted to him the idea of omitting the East Side line between 3d and Lenox Avenue, connecting with the Manhattan Railway on the basis of an 8-cent fare, and laying out the Jerome Avenue line at least as far as the intersection of Jerome and Cromwell Avenues, and then eventually extending the East Side line by some direct route to 42d Street. Mr. Niles strongly favored this plan seeing that it offered the people in the Bronx Park district immediate rapid transit, although at an 8-cent fare. He said that he would see some of the people up there and would get a committee appointed and call one me with a request that this should be done, and then if possible get the action afterwards ratified by the Tax Payers' Alliance.

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*W.B.P.*



J U L Y 20, 1900.

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Authorized Value to lay out the 181st Street shaft 12 ft. wide by 20 ft. in length.

Notified Loomis over the telephone that 110th Street would be filled up. He notified me that the 110th Street change of having but one crossing was satisfactory.

Had a call from Mr. Simpson of the Consolidated Gas Co., who wanted to know who was going to pay for their inspectors. Pointed out to him that nobody else's inspectors were being paid, that only the actual work done was taken into account. He informed me that the proposed arrangement for the pipe galleries was satisfactory; and <sup>that</sup> inasmuch as the Consolidated Company had control over the Mutual, it would not be necessary to duplicate the latter's line.

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J U L Y 21, 1900.

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Mr. Langdon called and explained to him what I was doing in regard to the Bronx, which he approved.

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*H.B.C.*

J U L Y 23, 1900.

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Examined with Hendrick work at Pearl Street and Oliver Street. At Pearl Street found the concrete under the pavement very poor.

Authorized Value to lay concrete at the North approach to the Manhattan Valley Viaduct, with natural cement, and proportions of 6 stone, 3 sand, and 1-1/2 cement.

Rice absent in Boston to-day as well as Saturday.

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J U L Y 24, 1900.

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Went to Construction Company's office and met Deyo and C. Vanderbilt. Show<sup>ed</sup> them the proposed plan for a single-deck station at 42d Street, which was approved by those two and Bryan and Mc Donald, Vanderbilt making a suggestion to throw the tracks a little farther to the east so as to get them under the new station.

Discussed with Mc Donald the question of estimates, and decided to begin estimating on August 1st.

Had a conference at Mr. Larkin's office, 54 Wall Street, with Mr. Larkin and William Jay, Farrand, Engineer for the Receiver of the 42d Street Road, and Starrett representing the Third Avenue Road, in regard to the moving of the tracks on Broadway between 122d and 129th Streets. Insisted that the

J U L Y 24 (Continued)

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work which had begun that morning on 125th Street should be immediately stopped. This was ordered done by the Receiver, and the matter was referred to Farrand and Starrett to see what changes in track alignment was possible.

At 3:30 met at Wilgus's office C. Vanderbilt and Deyo and discussed the question of building under the Grand Central Station. Wilgus seemed to think that the proposed plan obviated the engineering objection, but declined to express any opinions one way or other, as it was a matter of policy to be decided by Mr. Callaway.

Afterwards Deyo and I inspected the excavation in 42d Street for the change in the surface roads, and then examined the work at 110th Street where Farrell is building a sewer.

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J U L Y 25, 1900.

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With Value and Klapp examined all work in progress from 120th Street to 181st Street. Found Shields had opened five blocks from 120th to 125th Sts. The work at 125th Street had been stopped. At 133d Street concrete was being laid for the foundations. Found the rock lies a distance of 7 to 8 ft. below the surface of the street. Permitted the contractors to use Natural cement concrete, with a proportion of 6-3-1, using a plentiful supply of boulders mixed in to them. The Portland

*A.B.C*

J U L Y 25 (Continued)

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cement concrete under the abutment was in fine shape, hard and firm, with a mixture of 6-3-1. The shafts at 181st St. was just beginning.

Hendrick notified me John Kennedy, Inspector at 125th Street Sewer was drunk. Ordered him discharged.

*H.B.C.*

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J U L Y 26, 1900.

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Had long conference with Deyo in regard to estimates, he stating that it would be perfectly satisfactory to him to receive an estimate from me on August 4. He desired, however, to get the information as to the make up of the estimate--namely, between what stations the various work was done.

Examined Oliver Street sewer with Rice, he stating that he had examined it the day before but found the South Street sewer filled up with old bricks.

Had an interview with Schneider who stated that steel ought to be delivered in a few days, as orders were out to the Mill for material and he understood that the special rails were cut. Was surprised when he learned that this was not the case, as reported by Aiken. Said that Swensson was raising all sorts of objections which he (Schneider) was disregarding.

Showed Deyo the plan for the proposed track to be laid in Brooklyn for test purposes

W. W. Niles, Jr. reported encouraging progress.

*Wm.*



J U L Y 27, 1900.

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Had conference with Roberts in regard to masonry. He told me that the prices which he had named for the delivery of the stone for the Manhattan Valley approaches, f.o.b. New York, were as follows :

Rock-faced ashlar,	\$18 per cu. yard,
Base course parapet, cut on one side.....	40 " " "
Parapet wall, cut both sides	81 " " "

Went over the advertisement for the condemnation of Manhattan Valey Viaduct with Harris, Assistant Corporation Counsel.

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J U L Y 28, 1900.

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Routine work.

Rice absent.

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J U L Y 30, 1900.

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Had conference with Schneider. Told me that he was trying to hurry forward the material, but that the large bulb angle rails had been cut first instead of the small ones, and asked me to approve D\_eyo's drawings so that the material could be ordered before the shop drawings were made.

Rice absent.

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*Mrb*



J U L Y 31, 1900.

Reported to Mr. Orr general condition of the work.

Had a general conference in my office with Schneider, Swensson, Deyo and Douglas in regard to the delivery of steel. Swensson stated that there had been considerable delay on the part of the American Bridge Company in getting the plans sent forward, and that he was endeavoring to get the making of details in his hands, which would facilitate matters. Discussed a number of details in design with the hopes of getting work facilitated. Both Schneider and Swensson promised to have matters hurried.

Deyo informed me that Mr. Callaway had a letter from Mr. Belmont declining, without stating reasons, to entertain the connection between the Harlem Railroad and the Rapid Transit.

Shepard informed me that there were great doubts as to when the Fort George extension could be carried through the Municipal Council.

Rice submitted a list of cement tests of the Aqueduct Commission.

*H.S.B.*

AUGUST 1, 1900.

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Examined the sewer work at Pearl Street, Oliver Street and Centre Street with Hendrick. Afterwards sewer at 9th Street, and the work on Elm Street from Great Jones to Houston with Carr,- Carr suggesting stopping the pipe gallery on the east side at 4th Street and the west side at Great Jones St. where the 36-inch water and 30-inch gas respectively stop. As this would avoid the tearing up of the vaults on Lafayette Place, thought it a good idea.

Deyo and Degnan called in regard to the probable refusal of the Dock Department to give them a dump at Pier 28.

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AUGUST 2, 1900.

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Saw Bensel in regard to the Dock Department dock, and he advised me to do nothing, he intimating that the Dock Department would probably decline to grant the request. Inquired as to his procedure in discharging men, he stating that he always laid them off by telephone message, and then reported the matter to the Dock Department Board.

Had a conference with Deyo in regard to the pipe gallery stopping at Great Jones Street and 4th Street, which he approved. Also had a conference with Seaman and Deyo in regard to the non-splicing of the beams over the intermediate column

A U G U S T 2 (Continued)

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on the Fourth Avenue work, advising both of them that it would delay construction to have the long rather than the short beam. Deyo agreed with me, but Seaman said that the contractors he represented wanted otherwise.

Conferred with Shepard in regard to the form of making the estimates, he agreeing with me that I could report the units to Mc Donald and Mc Donald subsequently make a requisition for the same converted into dollars on the schedule agreed on between Mc Donald and myself. Shepard advised that I should submit the method of procedure to the Rapid Transit Board.

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A U G U S T 3, 1900.

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Received letter from Mr. Kane ordering the sewer work at 10th Street and Mulberry Street dug up. Conferred with Shepard in regard to letter for Mr. Orr to write.

Had long conference with Deyo in regard to the arrangements for shipping steel, as to which sections were to be delivered first. Subsequently a conference with Deyo and Mc Donald. Latter told me that he was having difficulty in letting Section 6, as the Bankers were too particular in regard to the bond required. Also he asked for a special order to build Elm Street.

Told Deyo about Loomis' advice that the 10th and Mulberry

A U G U S T 3 (Continued)

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Street sewers be torn up. Deyo told me that Loomis had boasted to C. W. Hunt that he would show me before the work was over that I did not own New York. One of the Assistants also said the same thing to Mr. Bryan. Called on Loomis in regard to his orders to rebuild the sewer and had a frank talk with him, in which I pointed out that the work had been done under inspectors of his own selection, and that we were therefore not responsible. - Also went over the matter of inspectors and the delay in getting them, and he said that that was a question over which he had no jurisdiction, as it was wholly in the hands of the Deputy Commissioner.

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A U G U S T 4, 1900.

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Went all over the uptown work north of 110th Street with Hendrick, Value and Klapp. Ordered the foundations for the masonry approach, where rock was not to be found, to be not less than 4 ft. and not over 5 ft. below the surface of the street.

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AUGUST 6, 1900.

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Examined 22d St. and Oliver St. sewers with Hendrick. In regard to the junction of the South Street sewer, told Hendrick to confer with Mr. Loomis.

Had a conference with Bryan and Deyo in regard to the station at 104th Street. Finally agreed to put in a large shaft and to consider subsequently the establishing of a station there. Told Deyo that the 22d Street sewer was not proceeding fast enough, as at present rate it would take nine months to complete it to 4th Avenue. Also advised the immediate beginning of the work on the Boulevard.

Had a conference with the Committee of Bronx property owners in regard to changing the east-side line. Sentiment seemed to be adverse, property owners stating that they had invested largely in real-estate for speculative purposes for the present.

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AUGUST 7

To

AUGUST 23, 1900.

No diary kept; Mr. Parsons on vacation.

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Aug. 24 to Sept. 17

Prof. Frey on vacation

Diary notes in Memo.

Book kept by Mr. Parsons

S E P T E M B E R 19, 1900.

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With Carr examined work at 34th Street. Found excavation at work in the rock;- rock close to the surface and of very excellent quality. Ordered Carr to have the railing at the top and side of the Park Avenue tunnel fenced. Also directed Nixon (Shaler's representative) to remove the small iron column supporting the shed over the stairway on the east side.

With Carr examined work at 10th Street. Found excavation in progress at the two drifts beneath the southbound metropolitan track, excavation being supported by posts. Contractors informed me that they intended to have long longitudinal beams with needles resting on the beams and extending both ways to the curb on one side and under the Metropolitan track to a bent on the other, and then removing all posts. Excavation to be wide enough to go 2 ft. beyond the central column. Carr said that they were willing to excavate a slice at the bottom outside of the foundation stone in order to get in more concrete. This I disapproved of as not permitting the concrete to be properly rammed, two feet outside of the foundation stone I considered enough.

Deyo, Mc Donald, Holbrook and Seaman called at the office showing correspondence with the Metropolitan Traction Company signed by Vreeland, he protesting against the present methods of Holbrook's construction and ordering that all cables be drawn and laid in another street. Suggested that a reply should

S E P T. 19 (Continued)

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be sent requesting them to wait and see the permanent and not temporary method employed in construction. I urged on Mc Donald to write a letter to the Traction Company suggesting that a conference be held between Starrett, Deyo and myself, and that at all hazards an injunction must be avoided until our work was well established.

Shaler called and asked that he be allowed to sink his shaft 5 ft. in the clear from the end retaining wall in Park Avenue tunnel. Approved.

Mc Donald informed me that the Park Department had declined the dumping request and that he would see Croker about it--that he thought that Croker would not wish the fact to be made public.

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S E P T. 20, 1900.

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Rapid Transit meeting in the afternoon. Explained to the Board the method of making estimates, which seemed to be approved, the Comptroller raising the only adverse criticism in regard to paying for steel in advance of being set.

The members of the Board seemed to be much pleased with the showing that I made in regard to having the power of the Board made supreme and being recognized as the controlling spirit.

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S E P T. 21, 1900.

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Examined with Value the work from 120th to 125th Street, and from 133d to 137th Sts. At the former place found the 5 drills at work and the "A" frames for the overhead carrier being erected from 114th to 116th St. At 133d Street the dumping stone being used for the concrete was too large. The manhole previously condemned I found being rebuilt. Discussed the construction of the facing brickwall and ordered the same to be made 8 inches thick of Flemish bond, with headers projecting on the inside one-half in number the headers of the face, and that no more than 8 courses of such brick work in height be built at one time, and then the concrete to be rammed in layers flush with the top.

Examined the sewers at 81st and 65th Streets. Found the present sewer at 81st Street badly out of line and the rock in the trenches overhanging the old work and apparently no backing of cement over the top of the arch.

Examined the work at 58th Street with Craven.

At 2 o'clock had a conference with Larkin and Starrett in regard to the Boulevard work. Starrett admitted that the ducts and cables could probably be maintained in their present position underground, but the cable to be low tension. They also agreed that the trench pits could be cut off to a depth of 4 ft. and the trench pipe moved to one side. At my suggestion he promised to submit a plan of the special work at 129th

Street showing how sharp the reverse curves could be made at the north and south end so as to connect the special work as constructed with the tracks as they will afterwards be widened. Larkin told me if Mr. Mc Donald would write a letter requesting that these various changes be made, he would make the same the basis for an appeal to the Court. I notified Deyo and Taft of this action. Mr. Starrett said that he thought that the high-tension cables should be drawn from the depths on Fourth Avenue, but doing this might cost \$10,000;- to draw all the cables might cost \$30,000.

Swensson called and promised to deliver 4,000 tons of steel in October, and would push the 60th Street Station all he could.

Had a conference with Long Island Railroad officials in Mr. Potter's office. Also present Bryan and Deyo. Decided to lay 1500 ft. of concrete contract on east-bound passenger track at Jamaica;- the Long Island Railroad to do the work but Mr. Mc Donald to pay the bill. We promised to see that a good concrete foreman and an engineer would be permitted to look after the work.

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S E P T. 22, 1900.

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Examined the shaft at 34th Street down 3 or 4 ft. only.

Examined the work at 10th Street and discussed with Carr and Seaman the pulling of the cables. Carr suggested that the existing high-tension cables might be killed but left in the ducts, but that new cables be laid on some other line and then after the work was over that either the cables could be sold back to the Metropolitan people or taken up and sold elsewhere. Submitted this proposition to Seaman and he seemed to think well of it.

Saw Wilgus who said that Mr. Deyo's suggestion of 22 ft. of the clearance of 42d Street had come from Deyo and not from Wilgus, and that he (Wilgus) knew nothing about the question of making a connection with the Harlem Railroad being reopened. Told Deyo this, and also suggested that we should call the plan on which we are working the Vanderbilt plan.

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S E P T E M B E R 24, 1900.

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Deyo called in regard to advice as to how Mr. Mc Donald should answer a letter from Fire Superintendent Croker in regard to removing the fire main on the Boulevard; his acceptance relating to blue stone, and to let me know that Mr. Mc Donald expected to get the dumping privileges at Pier 28 straightened out. Discussed with him the matter of estimates and agreed to raise the price of track on the arbitrary unit allowance \$1, and to reduce the price of rock tunneling \$1, and showed him that he must never exceed the estimate amount at all, but it should be reported at the nearest \$5,000 less than the figures we show.

Met Starrett, W. B. Reed and Deyo at 10th St. accompanied by Rice and Carr. Discussed the matter of supporting the ducts and high-tension cables. It seemed to be generally agreed that the proposed method was safe for the present, but that it did not take care of the changes that would be required at 14th Street and 23d Street. Starrett admitted that the Company would probably require in the future more high-tension currents, and it might be that new cables could be laid, the present ones cut out and the contractor paid the difference in interest in buying new cables now in advance of their being required. It was finally agreed to have Seaman study out what he proposed to do at 14th St. and 23d St. and report. Starrett said that the Company was willing to have the horse

S E P T. 24 (Continued)

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cars run on the electric lines between 23d and 14th Sts.

Found the work at 10th St. progressing--the I-beams in their place.

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S E P T E M B E R 25, 1900.

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Yesterday morning examined work at 34th St. Saw one blast fired which was composed of 4 holes about 3 ft. deep with 6-ounce sticks of 40% dynamite divided between them. The rock blasted out in good shape, showing a firm, hard, deep texture.

Stopped at 10th St. with Mr. Mc Donald. Found Daly and Seaman there. Work in putting in the needle beams progressing. Seaman asked permission to tunnel for the sewer connection from the south side of the trench to the 10th Street sewer. Told him he could do it in that special case, but objected to it as a general thing. He then asked whether I would return the actual quantity of excavation for the tunneling of the sewer or the quantities which would have been moved had the excavation been done from the surface in the ordinary way. I told him if Mr. Deyo requested it in writing I would return both sets of figures.

Had a call from Messrs. Morton & Holmes representing property owners in the Bronx in regard to the change of line. Told them that all that I wanted was an opportunity to try

S E P T. 25 (Continued)

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to get a direct east-side line, and that if they would consent I would ask the Board to suspend the construction of the link between 3d Ave. and Lenox Avenue until the completion of the rest of the track. If by that time no through satisfactory 5-cent fare connection was arranged for, then the contractor would be glad to construct the cross link. Showed them that the Contractor was equally interested with them in having that line connected up, as it represented an investment of a million and a half dollars. Another property owner called (name not ascertained)--spoke to him in similar strain.

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S E P T. 26, 1900.

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Attended a meeting of the Directors of the Rapid Transit Subway Construction Company, at which all were present, and submitted the proposed change of line at 42d Street in order to get beneath the New York Central Baggage subway. Met with universal approval, and was referred to Mr. Belmont.

Had a conference with Deyo in regard to the cost of building the proposed Brooklyn extension. His estimate was as follows :

Post Office to Bowling Green,	\$1,619,200
Battery Park Loop,	700,000
River section--2 tubes, 7500 ft. each, at \$650 a ft.....	4,875,000
Brooklyn end, at \$175 a ft.....	<u>1,137,500</u>
TOTAL,-	\$8,331,700

S E P T. 27, 1900.

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Called up J. V. Davies on the telephone who said that Deyo's estimate was excessive for the tubular tunnels. Went with Deyo, called on Davies, and Mr. Jacobs also. They said that the bid for the Hudson River tunnel, 18 ft. in diameter in the clear, was \$325 per running foot,- that their own estimate for the actual construction of the East River Tunnel was \$220 per running foot, and they knew that one of the bids that was made to the Long Island Railroad was at the rate of \$250, and they considered that a figure of \$250 for our work for each tube would be ample. At meeting of the Board sub-



S E P T. 27 (Continued)

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mitted no estimate.

Had a dispute with Mr. Starin in regard to charging for drafting instruments and engineering supplies. After the Board meeting Mr. Holman told me that from his experience, taking the Board of Education as a standard, this department was conducted at least 25% more economically and in better shape than that.

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S E P T. 28, 1900.

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Met at 9 o'clock at the shaft at 181st St. with the Division Engineers, Mr. Clarke and Mr. Deyo. Examined the shafts at 181st and 168th Sts.; work in progress at 156th St.; the sewer at 157th St.; the power plant at 165th St.; the work at 135th St., 110th, 116th, 114, 86th, 63d, 59th, 34th, 22d St. Sewer, 10th St., Oliver St. Sewer. At 135th St. found the concrete being mixed with gravel and broken stone, and a very much better article being produced than the stone alone, but the cement did not seem to be thoroughly incorporated with the stone, the cement remaining in large lumps. Told Value to experiment with the above wetter and dryer. Bradley's work, supporting the tracks at 63d St. was rather rough, and I told Craven to have Bradley examine the method at 10th St. and Fourth Avenue and recommended his adopting it on the Boulevard work.

S E P T. 28 (Continued)

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Mr. Deyo wanted the 2% accelerat<sup>ing</sup> grades at 168th and 181st. Sts. reduced to 1%.

Hendrick told me that Craven wanted him to take charge of longitudinal sewers. Spoke to Craven--said he had my permission provided the general jurisdiction of the work remained with the Division Engineer, but I did not care for divided authority in the same trench. Told Carr the same, but he said he preferred to handle the sewer directly but might ask Hendrick to help him occasionally.

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S E P T. 29, 1900.

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Routine work.

Tried to arrange with Deyo to go to Pittsburg Monday night, but he could not make it convenient.

O C T O B E R 1, 1900.

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Went with Mr. Starin to Jersey in the morning. Attended a meeting of Columbia Trustees in the afternoon, after which went with Rives and Value over the work at 116, 133, 158 and 168th Streets. Value reported that the trouble with the concrete that I had complained of was due to the fact that the cement was quick setting and was actually setting during the making of the concrete.

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O C T O B E R 2, 1900.

Examined the work at 58th St., 61st to 65th Sts., and 86th to 89th Sts. At the former met Mc Nulty and Farrand. At 86th St. found the work suspended while laying the new water pipe.

Stopped at 34th St. Met Carr and Shaler. Shaler told me that he wanted to get down to rock a little deeper before he put in the rock drills.

Examined sand at 14th St. proposed to be used for concrete and condemned the same.

Instructed Carr to have the work on Elm Street pushed.

Corporation Counsel Whalen called and wanted me to rent one of his office stores on Amsterdam Avenue near 155th St. for an office.

O C T O B E R 3, 1900.

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Deyo told me over the telephone that both Mc Cabe and Shields have promised to make better progress and that Mc Cabe would at once begin on the open cut near 155th St. and push it through to completion. Also said that Degnon was ready to do more rapid work on Elm Street but understood there were some vaults in the way. I told him if there were any vaults in the way I would have them removed at once.

Battalion Chiefs Kenny and Martin of the Fire Department called in regard to hydrants on Elm Street being rented out for service. Sent for Carr and suggested that they proceed to Elm Street at once and come to an agreement. Carr reported that there were only three hydrants that were affected, two of which would be changed as to location and the obstruction around the third would be removed.

In afternoon met Value at his office and went to 133d Street where inspected sample walls to determine whether the waterproofing should be put on the inside of the guard wall or the outside of the main wall. Decided on the latter.

Inspected 116th, and 104th to 110th. At the latter found that excavation had begun by the Park.

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O C T O B E R 4, 1900.

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In morning stopped at 34th and 10th Streets.

In afternoon Commissioners Orr, Starin, Rives, Langdon and Smith, and Rice, Carr, Hendrick, Burrows and myself examined the work in progress on Pearl Street, Oliver Street, Centre St., Elm St. near Houston, 4th Avenue at 10th St., 22d and 33d Sts., and the sewer on 22d St.

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O C T O B E R 5, 1900.

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At 8:30 was at shaft at 168th St. and fired the first shot in the cross drift from shaft to the tunnel.

At 158th St. found the tunnel progressing but no work done on the south end of the cut. Gave stringent orders to Mc Cabe to have that work taken up and pushed immediately. He asked permission to use a locomotive on the surface railway on Broadway. Told him to give me a picture and a description of the engine proposed.

At 133d St. instructed Value to put 12 x 12 piers behind the 4-inch guard wall wherever there was a land slide permitting their construction. Instructed him to have the tops of the centre column stones squared and to exercise special care in selecting the first 20 stones north of the 135th St. portal.

Went with Craven over all his work. Found Bradley had



O C T. 5 (Continued).

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suspended construction between 61st and 65th Sts. Gave orders to Craven that work must be resumed and that no excavation must be begun unless the contractor was prepared to push the same to conclusion without stopping.

Examined Naughton & Company's work between 47th and 50th Sts. Cautioned Craven about allowing him to open up any more streets in advance of receipt of steel.

Hendrick reported that Norton & Company were refusing to obey the inspectors' orders. Wrote Mc Donald in regard to it.

Saw Belmont. Told him that I had learned from Stephen H. Olin, through Rives, that W. K. Vanderbilt had the impression that the proposed change in 42d St. was due to a desire on the Contractor's part to save money in construction, and therefore suggested that the matter had better be taken up by the Rapid Transit Board in order to remove that idea if possible, and stated that if he approved I would ask Mr. Orr to write a letter requesting Mr. Vanderbilt to give me an interview.

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O C T O B E R 6, 1900.

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Saturday Mr. Parsons at Locust.

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O C T O B E R 8, 1900.

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Had a conference with Mr. Orr who approved of the Board taking up the 42d St. connection direct with the New York Central people, and he accepted a letter addressed to Mr. Vanderbilt which I had written. I reported to him that I was going to Pittsburg on Tuesday night to be gone for two days.

Banks the chemist called and stated that I would find the carbon paint a very satisfactory paint, and that he would prepare a chemical specifications.

Received from the Civil Service Commission a list of names for Pipe Laying Inspector. Told Rice to submit the same to Mr. Birdsall and get his selection.

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O C T O B E R 9, 1900.

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This morning called by appointment at 11:30 on W. K. Vanderbilt. Present at conference, Vanderbilt, Callaway and Wilgus. The latter two, however, did no talking at all. Explained to Vanderbilt that I was representing the Rapid Transit Board, and that previous negotiations between Belmont and Callaway had been taken up by the Contractors merely to facilitate matters--that there was no question of expense involved, but a desire on the part of the Board to make the best

possible arrangement for the people of New York. Vanderbilt replied that he did not wish any part of their property invaded by another road; that they had their own plans for the development of their property, and that it would be quite impossible to run other people's trains over their tracks. I retorted that he had a misconception; that the proposition was to run their trains over our tracks, and that as to invasion of the property I felt that that was probably a matter of detail rather than fact. Explained to him that our proposition was to take all their short-distance locals, which now constitute more than one-third of their trains run from and to 42d St., and that all I wished to know for the moment was whether such a connection was desired or not--the details could be arranged afterwards. He said he thought such a connection was desirable, provided there was no invasion of their property, and that he thought it would be well for Wilgus and myself to take it up on that basis and see what could be done.

After meeting called on Wilgus and asked him to give me such limitations as he could of the plans spoken of by Mr. Vanderbilt, as to what depth we should keep in order that those plans should not be disturbed. Wilgus declined positively to give any information whatsoever. He said that he thought that the plans should be first furnished by us. I

O C T O B E R 9 (Continued)

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retorted that I thought that was not treating the Rapid Transit Board quite fairly, and that I did not care to have plans simply turned down without explanation, as had been done in a previous case. After this he mollified somewhat and suggested that I should make simply a sketch plan to be brought forward as a basis for discussion.

Replied to Whalen over the telephone that I regretted that I could not see my way clear to have the Board hire an office as he wanted, because we already had a very suitable office, on two years' rental for \$900, and in a very much better locality. He replied quite curtly that he was sorry he had troubled me.

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ADDENDUM, OCT. 9, 1900.

Tuesday night left on 6 o'clock train with Deyo for Pittsburg.

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O C T O B E R 10, 1900.

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Deyo and I went to Aiken's office, looked over his records and found everything in satisfactory condition. Then went to the 33d St. Mill; found that they were not rolling on that day any of our shapes. Met Oviatt the Inspector, who Aiken reported as a good man, but one without previous practical



experience, but who was applying himself and learning rapidly.

After luncheon went with Swensson to the Keystone Works where we found shop work in progress. Inspector in charge, named Davis, impressed me as being a thoroughly good man. Made a thorough examination of the work in progress, Aiken pointing out that the present facilities limited the Rapid Transit output to an average of about 75 bulb angles per day, which would be the equivalent of about 1700 tons of finished product per month. Had a test made of two bulb angle columns, which was very satisfactory, the bulb angles standing up until the very last. The test was afterwards examined by Swensson, Jarvis and Schneider, and all expressed their surprise at the results, adding that they would use the bulb angle in their own designing hereafter, Swensson saying that the rolls for the 1/2-inch angles would be cut without any extra expense as these rolls would be put in stock. Looked over the matter of painting; examined the beams painted with red lead carbon paint and pure oil.

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O C T O B E R 11, 1900.

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Went out to Homestead, looked over the rolling mill plant there, inspector stating that there would be no trouble whatever in finishing 4,000 tons of material per month if necessary, evidently indicating that the limitations are at Keystone.

After luncheon went with Swensson to his office at Keystone and there had another discussion on the question of out-



put, Swensson claiming that Keystone could turn out 2600 tons per month, but with their present facilities that would be about their limit, thus substantially corroborating Aiken, and both agreeing that the limit was reached by the rotary facing machines and power riveters. The following machines Swensson stated as being necessary which he had just received the authority to acquire :

- 2 Rotary Facing Machines,
- 3 Punches, one being a cluster punch,
- 1 punch and shear,
- 1 plate shear,

Necessary riveting machines were then being made at Keystone.

At my request he (Swensson) called up Jarvis, the General Agent, and arranged an appointment at the American Bridge Company's office in Pittsburg, attended by Jarvis, Swensson, Deyo and Schneider. I pointed out to them that the general Contractor had a contract with the American Bridge Company calling for 4,000 tons per month, and that it was quite evident that, not only at this time but even now, the American Bridge Company was not capable of complying with the contract. Jarvis replied that he supposed "the 4,000-ton requirement was bluff," but that if we required 4,000 tons the necessary machines would be installed to turn them out, and that I could depend upon getting an increased amount in the future. They

O C T O B E R 11 (Continued)

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also promised Deyo to see that the orders were completed as rapidly as possible and in order.

Left Deyo yesterday in Pittsburg to join Mr. Belmont in examining the Westinghouse plant.

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O C T O B E R 12, 1900.

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Went on the work with Value at 133d St. and found waterproofing in progress. The brick guard wall was carried up about half its height, necessitating a horizontal joint. Gave orders that this wall should be carried to its full height and some arrangements for bracing be adopted so as to avoid the horizontal joint. The waterproof contractors requested the right to butt-lap all layers of felt except the outside one. This I refused, stating that the outside lap must have a full lap of 3 inches, and that all subsequent laps might be given a good lap but of less dimension, care being taken to insure against broken joints at all places. Also called the inspector's attention to the fact that the edges of the rolls werenot being stuck down, and that some means must be devised to secure this detail.

Examined the work at 116th St, and on Craven's section as far south as 60th Street, at which point I met him, he stating that he had given orders for concreting to begin.

In the afternoon Rice showed me a letter which he had just received from Brandis enclosing a bank note of \$20, which, of course, he said he would return at once.

O C T.12 (Continued)

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J. Romaine Brown called explaining that he owned the N.E. corner of 103d Street and the Boulevard under which our road is projected to run; that he wanted the line moved either to the westward 48 ft. or to the eastward at the corner; that the man now at the corner was anxious to pay out, and that he would pay to the City whatever the City was obliged to pay to the corner owner; that the change suggested by him would involve very materially less cost than our present route.

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O C T O B E R 13, 1900.

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At 1 o'clock the first steel erection took place on Section 13 at 135th Street, four bents being erected. There were some slight irregularities found in the elevations of the footing stones which had been set hurriedly, but everything else satisfactory.

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O C T O B E R 15, 1900.

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Had a long conference with Deyo and Mc Donald in regard to 42d St. and the delivery of steel. Mc Donald and Deyo agreed with me that the plan for connecting with the New York Central south of 42d Street and Fourth Avenue was objectionable as precluding the making of any junction with our own

O C T. 15 (Continued)

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road at that point.

Mr. Brewster as Attorney for a prospective tenant at the N.E. corner of 42d Street and Broadway called in regard to his client taking the property. Explained to him that the chances were that the building would be maintained but could not guarantee it;- there would be more chance of being able to maintain it if the tenant of the ground floor was a "whole-sale" man as his client was rather than a retailer, but I thought that the work itself of reconstruction would occupy about three months, to begin some time in the early spring.

Examined 10th Street with Carr and discussed the question of waterproofing

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O C T O B E R 16, 1900.

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Met Value in the early morning. Went down 168th St. shaft; found the heading in 25 ft. with an excellent dry roof. At 158th St. found the heading in 50 ft. Met Mr. Mc Donald and Mr. Birdsall on the work. Directed extra struts to be put in to support the large water main which was liable to slip and break. Also gave instructions that work should be resumed at the south end of the cut and pushed vigorously. This was promised.

Examined 133 and 116th to 114th Sts. Stopped next at



O C T. 16 (Continued)

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10th St. and found that waterproofing was to begin at 1 o'clock. Went back at 1 o'clock, but owing to mistake in the heating of the Asphalt Heater, work was postponed until late in the afternoon. The Contractor informed me that he was not going to concrete the second hole until the material and track were removed, which would involve a delay of two weeks as the supporting beams had not arrived. Directed him to proceed with the concreting and the erection of as much steel as he could, which he promised to do.

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O C T O B E R 17, 1900.

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This morning went with Craven over all his Division except work at 86th Street. Found the 20-inch pipe trench dug from 65th to 60th Sts., but no pipe laying in progress. Directed Craven to be more energetic.

Had a conference with J. Romaine Brown who said that the worst possible line crossing property between 103d and 104th Sts. was the one that we located--urged its removal either north or south.

Conferred with Shepard in regard to the Brooklyn extension; the acquisition of the 8th St. and 104th St. property by private sale rather than condemnation, and the preparation of resolution to be passed by the Board calling for night work on Mc Cabe's section, as Mc Cabe informed me in the morning that the Health Board had forbidden him to do night work.

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O C T O B E R 18, 1900.

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This morning went with Hendrick over the 54th and 65th St. sewers, and also the 81st St. sewer in response to the complaint by Mr. Bennett, representing Mr. Jesup. Ordered all earth removed at 54th St. Ordered the force increased at 65th St. Directed the street surface to be cleaned at 81st Street; the sewer to be roofed over where the top had fallen in, and the work to be prosecuted in double shifts. Made a complaint to Mr. Deyo personally later.

Stopped at 10th St. with Carr and found the waterproofing still in progress. Condemned the footing stones that were cracked and so notified Seaman.

At meeting of the Board presented letter which I had drafted to be sent to Mr. Vanderbilt, which the Board, after consideration and some amendments, decided that it had better be sent by Mr. Orr.

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O C T O B E R 19, 1900.

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Stopped at 34th Street and examined work there with Mr. Shaler. Also examined the various work in progress on Fourth Avenue.

At 2 o'clock attended a meeting of the Change of Route Committee at the Construction Company's office. Discussed 42d Street and laid before it what had been done by the Board.

Aiken in New York. Conference with Deyo, Lesley and Aiken, at which Lesley made some suggestions in regard to the cement specifications asking that the boiling tests be put at the end of the specifications with Chemical Analyses and made optional, and that the pats be allowed to set in air for twenty-four hours instead of three hours before boiling. Granted.

Stewart Brice called in regard to the stone and asked for a further test, which I declined as I was satisfied that the present stone would not do. I told him that he would have to submit others.

Carr reported to me over the telephone that Mr. Schlesinger, the owner of the building at the corner of Houston and Elm Street, consented to the use of his area wall as a party wall between the subway and his property. Instructed Carr to inform Mr. Schlesinger that some sort of a deed would have to be signed by him in return for saving him the annoyance of having his property entered.

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O C T O B E R 20, 1900.

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Examined the work on Value's section on Broadway.

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O C T O B E R 22, 1900.

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Examined the work at Chatham Square with Hendrick. Found the vitrified pipe sewer on Worth Street being turned up. This pipe was laid on a reverse curve without any concrete base and was half full of sediment. The shaft at Chatham Square was down about 20 ft. Ordered corner braces put in below that depth.

Had a talk with Douglas Robinson in regard to taking charge of the condemnation of the real-estate, which he said he would gladly do, and would charge us a fair commission. The amount being allowed him by law is 1 per cent., but he thought that probably about one-half of that in our case would be right, but on no account could he undertake to go on the stand.

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O C T O B E R 23, 1900.

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Examined the whole of Carr's Division. Met Carr, Paschke and Fisher in front of the building at the N.E. corner of Houston Street where the question of underpinning was up. Advised Paschke that the proper method to pursue was to order the sub-contractors to go ahead and to sheet the foundation and not attempt to underpin. Paschke said that this course he approved of, and also did Carr. Informed Deyo subsequently, and he said I had done right.

Had a talk with Rives who strongly objected to Shepard's theory that we had to go to the Common Council for a change in the Post Office Loop. Rives approved of what I had done with Douglas Robinson and advised going ahead.

Esler told me over the telephone that some English capitalists were willing to build the East River tunnel from Ann Street, and wanted our Brooklyn plans held.

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O C T O B E R 24, 1900.

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Examined the work at 34th St. and at 10th St. Found steel going in at the latter and asphaltting of second hole taking place.

Saw Baldwin and ascertained from him that he was still opposed to the Vesey Street route. Met the Executive Committee of the Contractors at a conference, at which the Vesey Street route was discussed, but was opposed by everybody. No decision, however, was reached.

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O C T O B E R 25, 1900.

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On Thursday made an inspection of the upper part of the work, accompanied by Commissioners Orr, Rives, Smith and Langdon, all of whom expressed their gratification as to what they found.

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FRIDAY, OCT. 26, absent.

SATURDAY, OCT. 27 spent with Mr. Jesup at Lenox.

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O C T O B E R 29, 1900.

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Examined the work on Carr's Division.

Had a conference with Shepard and Wickersham in which I urged the necessity for immediate progress in regard to



O C T O B E R 29 (Continued)

Fort George.

Examined the shaft at Chatham Square. Suggested to Meem the desirability of putting a sheet metal tail piece on the roof polling boards in order to prevent earth from dropping in.

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O C T O B E R 30, 1900.

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Examined the work at 22d Street, and in the afternoon at 10th Street.

Saw Seaman, and impressed on both Seaman and Carr the necessity for pushing the excavation at 22d Street in preference to the excavation at 27th Street.

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O C T O B E R 31, 1900.

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Staff meeting in the afternoon, at which was discussed the method of laying mortar instead of concrete immediately on top of the waterproofing, the general impression being that 4 to 1 would be as weak as desirable to use.

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N O V E M B E R 1, 1900.

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Submitted at meeting of the Board held to-day letter addressed to Mr. Orr from the Commissioner of Sewers suggesting that the pipe galleries be omitted. Also stated to the Board that Mr. Mc Donald was anxious to get out of his part of the contract, and that my advice would be to go back to our original plans; that if the Department of Sewers was opposed, I thought that we would have great difficulty in doing the work.

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N O V E M B E R 2, 1900.

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Went with Craven over his work from 54th to 86th St. At 86th Street found that the bottom of the trench at about sub grade. Told Craven that he need not blast except so as to bring the points of the rock beneath the waterproofing course and then fill over the surface of the rock with concrete.

Had a long conference at Mr. Boardman's office with Cassatt, Baldwin, Rae and Jacobs in regard to a tunnel from Long Island Railroad at either 34th or 42d Street. Their plan contemplated an express station at 34th Street with an iron platform. This I argued against and showed them that it was absolutely impracticable. I stated that, in my judgment,

N O V. 2 (Continued)

42d Street would be a better line locally than 34th. They all seemed, however, set on 34th Street.

Told Baldwin that I thought that the Subway Construction Company ought to make some preparations for wells for cable feeders outside of the tunnel, and thought that the outer wall of the tunnel would be a good place to locate them by using hollow conduit tiles instead of brick or concrete, but that the proposition must come from them. He then brought up the question whether I would wish to have two express tracks if four tracks were built south of the City Hall. I told him by all means to build a double-track construction on Broadway, and advised that his people should write to the Rapid Transit Board to that effect.

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N O V E M B E R 3, 1900.

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Stopped at 22d St. and found no work had been done yet in putting in I-beams. Cautioned Carr that the work must progress more rapidly,- that I will hold the contractors responsible for the 30-day limit.

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ADDENDUM--Nov. 3.

Conferred with Shepard in regard to a report to the Board on the pipe gallery question. Explained to Shepard that I thought that we should give in, as the pipe galleries were not a necessary function of the railway. Shepard was inclined to fight for the pipe galleries, but said he saw the force of my argument and advised me to see Rives.

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N O V E M B E R 5, 1900.

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Tried locomobile. Examined work with Value at 116th, 135th and 158th Sts.

Saw Rives, as suggested by Shepard, who approved of my handling the pipe gallery question.

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N O V E M B E R 6--election Day.

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N O V E M B E R 7, 1900.

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Mc Donald and Deyo called. Discussed with them the question of pipe galleries and the East Side line. Mc Donald said he did not care to build the pipe galleries, and that the proper thing to do was to give in to Kane's suggestion.

Douglas Robinson called, and started him on getting the property at 8th St. and 103d St.

E. J. Farrell called in regard to the shaft at 104th St. I declined to order the same as an unnecessary part of the work.

Mr. Niles called in regard to the East Side line. Told him that nothing could be done unless the people on the eastern part of the Bronx would abandon the continuous line.

Had a conference with Shepard. Drew up the report on Kane's letter.

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N O V E M B E R 8, 1900.

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Went with Carr over the lower part of his Division accompanied by Fisher. Discussed methods of keeping the Degnon-Mc Lean people at work during the delay caused by considering the suspension of pipe gallery construction.

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N O V E M B E R 9, 1900.

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Took an automobile lesson in the morning, and then came down over the work examining it from 76th St. south.

John N. Golding called. Asked if we were ready to begin the buying of the 8th and 9th St. property. Told him that we had already acquired it. He asked if I were "bluffing." I told him that I was not, and that Douglas Robinson had started to buy it for us;- that having heard nothing from Golding or Wanamaker, I had supposed that they were out of it entirely. He seemed to be very much disappointed, and said that with them the right of way would have cost us nothing. I told him the opportunity to make that offer was still open, but that otherwise we would go ahead and purchase the property in question and then sell it to him or anybody else after we had located our station. He asked if access could be given from the buildings above to the station? I told him yes, if the decision was arrived at quickly. He asked if we could stop our work of taking tackle until Monday. I told him yes, and



N O V. 9 (Continued)

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at his request so notified Douglas Robinson. Later spoke to Golding over the telephone, he stating that he was trying to get Wanamaker over the long-distance 'phone to come to New York, and that he would give me an answer on Monday.

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N O V E M B E R 10, 1900.

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Deyo informed me that Jay had requested that the detail plan showing the exact alterations of the drainage pipes and the alterations of drainage pits must be submitted.

Saturday afternoon went over Craven's work accompanied by Ridgeway, and over Value's work on Broadway as far as 135th St. Went into the tunnel. Gave orders to Value to h<sup>ave</sup> the approachs squared up and the concrete arches turned.

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N O V E M B E R 12, 1900.

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Went over Value's work on Lenox Avenue, and the shaft at 168th St. At the latter point found headings turned north and south.

In the afternoon Wanamaker and Golding called in regard to the purchase of the property between 8th and 9th St.--Wanamaker very indefinite. Asked for suggestion. Told him that I thought that the proper thing to do , if he bought the property, was to give us an easement across it, and that we in

return would pay for the foundations for his new building and design the station to meet his wants. This idea he refused as being wholly inadequate. Then he said he thought that the proper plan for him would be to go ahead and buy up all the property, and then we could deal with him afterwards. Told him that I thought we should come to an agreement at the outset. Golding said that they had a price offered for the Dooley property next to the corner of \$37,500,- thought they could buy it for \$35,000. The next two lots owned by Metzger they had an option on for \$68,500.

Told Carr to see Birdsall and to explain to Birdsall my proposition in regard to the pipe galleries; that Loomis' objections were captious, but I did not care whether the galleries were built or not--that he and Loomis objected and they must now take the responsibility, and that I would do whatever they wanted. Birdsall said he thought the galleries would be a good thing provided they were not overcrowded with pipes in the future.

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N O V E M B E R 13, 1900.

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Had a meeting with Stillwell, Bryan and Deyo in regard to power. We discussed the building up of the sidewalls with hollow terra-cotta tiles. Made the suggestion when building cars to omit the end platforms and put the doors at the quarters. Stillwell thought this a most excellent idea.

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N O V E M B E R 14, 1900.

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Inspected the work south from 60th St.

Had a call from Von Deilen in regard to his property at the corner of 8th St. and 4th Avenue. Said that he did not want to sell or be condemned. Preferred to negotiate for the easement and retain the right to build on completion of our road.

Douglas Robinson called in regard to the 8th and 9th St. property.

Had a conference with Mc Lean, Nichols and another engineer from the Comptroller's Office in regard to pipe galleries, asking that certain extra details should be prepared.

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N O V E M B E R 15, 1900.

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Examined with Craven his work from 60th St. south, and with Carr his work from 22d St. south.

Meeting of the Board, at which I submitted the idea of cutting off the corner at 8th St. and widening Astor Place, which everybody seemed to approve.

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N O V E M B E R 16, 1900.

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Routine work.

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N O V E M B E R 17, 1900.

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Deyo called and discussed the question of ducts in the side walls. Made a compromise suggestion of using Natural cement concrete in the walls, omitting the outside row of brick and painting the inside surfaces of the ducts one coat Pot asphalt.

Discussed with him the question of the pipe galleries and the cost of same, and suggested that he better have Wickersham appear before the Board next Thursday to state that Mc Donald did not understand that he (Mc D) would have to pay the interest on the cost of the pipe galleries, and to ask if that burden could not be relieved.

Also explained to him the plan of widening Astor Place, which he thought excellent.

Also told him about my embarrassment in the suggestion of the improved car plan which I had explained to Stillwell. Thought latter might use it on Metropolitan Railway.

In afternoon, went over the work with Value.

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N O V E M B E R 19, 1900.

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Routine work in morning. Took the Belgians over the Rapid Transit work in the afternoon.

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N O V E M B E R 20, 1900.

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Went with Deyo in the afternoon to Jamaica and examined the track being built there.

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N O V E M B E R 21, 1900.

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Examined all the work south of 34th St.

Staff meeting in the afternoon, at which the recent trip of Carr and Clarke to Boston was discussed.

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N O V E M B E R 22, 1900.

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With Craven and Value went over all of the 2d and 3d Divisions.

In the afternoon Rapid Transit meeting, at which Belmont and Wickersham appeared, when the question was raised to dispense with building the pipe galleries. The opinion of the Board seemed to be that we had better drop their construction.

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N O V E M B E R 23, 1900.

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Boardman called at my house at half-past eight to suggest that I confer with Shepard in regard to the resolutions to be prepared to be presented to the Board on Wednesday, eliminating the pipe galleries, as he (Boardman) had made up his mind that the proper thing to do was to drop the question.

Golding called and asked me to help him to procure for Wanamaker the property at the corner of 8th St. and Fourth Avenue. Told Golding I would have nothing whatever to do with him or Wanamaker until I got a proposition from them stating exactly what they would do.

Attended a long meeting in Mc Donald's office of the Change of Route Committee. The question of four tracks to Bowling Green was discussed, and also the construction of the sidewalls and of the pipe galleries. In regard to four tracks, I told them that, in my judgment, the Board would not at present make a request for any new route other than Broadway, but that Mr. Belmont had better go before the Board himself and ask the question and not leave it to me.

In regard to the ducts for the sidewalls, I told them that, in my judgment, the ducts were part of the equipment, but that if they differed from that opinion they had better take the matter up direct with the Board. Advised Wickersham personally that I thought it would be an error of judgment for them to ask the Board to treat it as part of the Rapid Transit

N O V. 23 (Continued).

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construction, as it might give somebody the right to interfere with their renting them out to other parties in the future.

After the meeting was over, had a talk with Wickersham and Mc Donald and urged, as I had done previously, not to wait for the Rapid Transit Board to decide the matter of payment, but to order the construction taken up at once. This Mc Donald said he would be responsible for.

In regard to the pipe galleries, Deyo gave a report to Belmont in which he showed that the cost of work to date, including Degnon-McLean's bills for extras and the net loss on steel manufactured, would be about \$38,000. This total, however, subject to some further reduction. After a general discussion, Belmont said that he would agree to have this amount capitalized against them.

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N O V E M B E R 24, 1900.

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Routine work. Heavy rain.

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N O V E M B E R 26, 1900.

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Inspected the work at 60th St. and on 4th Avenue. Found that the heavy rain had done no damage. Similar reports received from Division Engineers.

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N O V E M B E R 27, 1900.

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Examined Carr's Division in the morning. With Carr went over Craven's and Value's work in the afternoon. Met Mr. Langdon at 153d Street.

Tuesday night met Mr. Deering by chance at the theatre. He told me that his Superintendent had been up here and saw the plans, and was satisfied that we were not on private property at 168th Street.

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N O V E M B E R 28, 1900.

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Rapid Transit meeting in the afternoon.

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N O V. 29 (Thanksgiving Day)

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N O V E M B E R 30, 1900.

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Routine work, and went over Carr's Division with Cornell students.

Conference with Mr. Shepard in the afternoon, in re. 42d St. connection.

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D E C E M B E R 1st, 1900.

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Made a complete investigation of the work with Mr. Orr.

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D E C E M B E R 3, 1900.

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Conference with Bryan in regard to building two tracks on Church Street. Told Bryan that I did not think that the Board would ever consent to taking a portion of St. Paul's Churchyard; nor did I think for a moment they would consider any proposition looking to the use of any street other than Broadway.

With Rives examined the work from 59th St. north.

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D E C E M B E R 4, 1900.

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Deyo and a representative of the Pencoyd Works called, and with Klapp, discussed the Manhattan Valley Viaduct.

In P.M. conferred with Shepard in regard to letter Mr. Orr was to write to Mr. Callaway.

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D E C E M B E R 5, 1900.

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Discussed Value's work with him at 116th St. Told him that, wherever he found that rock was liable to come down and

D E C. 5 (Continued)

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break through the side-wall it must be removed, even if it came outside of the neat lines.

Stoppped at 81st Street on the way down, and found little work being done at night and with considerable bad odor.

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D E C E M B E R 6, 1900.

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Went all over Carr's work with him. Told Holbrook that I did not consider he was making satisfactory progress, and that I thought if he used more men with pick and shovel he would work with better economy. Accepted the pile of sand at Union Square, but told Holbrook that I thought it was pretty fine.

Shepard called and we discussed the question of building the ducts in behind the walls. Suggested to Shepard that I believed that the Construction Company would be willing to pay a small percentage of gross receipts in return for the right to use any surplus ducts for proper purposes.

Notified Deyo that I would hold up the estimates until next Monday to see if the night force was put on at 81st St. sewer. If at that time no night force was at work, I would send in the monthly estimate with the whole of Bradley's work cut out.

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D E C E M B E R 7, 1900.

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Had a long conference with Bryan, who pointed out that the cost could be very much reduced if they could contemplate beginning operation with stopping the Express service at 96th St. and not running express trains beyond that point. I told him I thought that would answer.

I also proposed to him the idea of obtaining a percentage of the gross receipts to the City if the ducts were leased for other than railway purposes. He said he thought that this would be done and was a happy suggestion.

We discussed the question of disconnecting the east-side line and building a line up Jerome Avenue. He said that he talked the matter over thoroughly with the Manhattan people, and considered that this line could be transferred to them for

a continuous 5-cent fare on completion of the other system, provided the suspended link was not constructed.

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D E C E M B E R 8, 1900.

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Inspected work north of 47th Street with Rice.

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D E C E M B E R 10, 1900.

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At request of Value, examined the excavation at 115th St. Found indications of quicksand.

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DECEMBER 11, 1900.

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Attended a meeting accompanied by Rice and Carr of the Board of the Borough of Manhattan, in regard to the extension of Lafayette Place. Opposition was represented by Wanamaker, Dooley and Von Deilen. The matter was laid over until December 21.

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DECEMBER 12, 1900.

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Spent the day with Rice at Egypt looking over the cement laboratory. Very much pleased with the general outlook of the offices and the way the work was being conducted. Saw some briquettes of slag cement being broken which gave very poor results. The representative of the Slag Cement people was there, who stated to Walker that the briquettes should be well rammed, and he did so, but the briquettes so rammed gave lower results than the briquettes made in the ordinary manner.

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DECEMBER 13, 1900.

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Examined all of Carr's Division. Found better progress being made.

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D E C E M B E R 14, 1900.

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Inspected 181st St. shaft. Found considerable water at the bottom, due to the pump breaking down.

At 2 o'clock attended a meeting of the Committee on Highways of the Board of Aldermen, with Commissioner Rives, and explained the reason for the Fort George change. Afterwards called on Mc Donald, and told Mc Donald that I did not consider that the work was progressing quite fast enough--that the force should be increased considerably, and that by Spring at least four times as much work should be done as is now handled. Also told Mc Donald that I had got very good options on the property at 104th St. and the Boulevard, and that I understood that he wanted to buy them so as to save annoyance during construction. He told me that was so- that Mr. Belmont would buy them and hold them in the interim.

Deyo stated that he thought we were not progressing quite fast enough with our station plans. Discussion followed in regard to maintaining the walls of vaults along the line, and I told him that until I was overruled I would insist that it was the duty of the Contractor to take care of vaults and to replace vault walls that were torn down.

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D E C E M B E R 15, 1900.

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Went over Value's work with Value and Rice. Found that all work of excavation at 135th Street had stopped. Had a talk with Kinsey and Value, and told them that I thought that that work should continue until we reached the special plans for the 137th Street Station.

At 168th St. shaft, told Kinsey that I did not want any more of the 50-ft. roof exposed than was absolutely necessary. This was more especially true at 181st Street where I did not think the rock was as strong as it was at 168th St. He said that they wanted to blast out the full width in front of the shaft so that the flying rock would not destroy the guides of the cages. I told him that if he would make a crosscut, say, 15 ft. wide for the full width of the tunnel and then drive the heading north and south for the narrow-tunnel section, the shoulders could be easily removed subsequently just previous to the lining of the arch, and that 15 ft. would release the rock so that the heavier charges would blow it out.

Called at the house of Wm. A. Read by request. Read showed me a letter from Deyo stating that they would be much delayed by my office not furnishing them with the iron plans, and that in conversation Deyo said that I was snowed under by excess of work. Mr. Read said if that was the case and I did not have sufficient force as Deyo charged, they would be very glad indeed to furnish additional draftsmen. I explained the matter to Mr. Read; that work was progressing well in advance, and if there was any delay that it was on the other side. Asked me if I would make the same statement

D E C. 15 (Continued)

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to Mr. Oakman and Mr. Vanderbilt. Said that I would.

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D E C E M B E R 17, 1900.

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At 11 o'clock Mr. Orr and I met Mr. Callaway, Judge Williamson and Mr. Wilgus in the New York Central office. Mr. Callaway showed plans for the improvement of the Grand Central Station by the building of a double-deck station for local trains beneath their present station, and a large loop enclosing these tracks, said loop to extend to Madison Avenue. He said it would be utterly impossible to have anybody else interfere with their property, but that they would be very glad indeed to make connection with our line on Park Avenue south of 42d Street, and to construct a passageway from our platform to their waiting room..

At 2 o'clock, at Mr. Read's request, called at the Board Room and found a full Board meeting in progress. Was invited in. Told them what had happened at the Grand Central meeting in the morning, and suggested that they proceed at once with the getting in of the bids for the 42d Street line. After the meeting invited Mr. Oakman and Mr. Vanderbilt to call at my office.

Told Deyo about the excavation at 135th St. He said he would take it up with Mc Cabe and order the excavation conducted.



Oakman and Vanderbilt called. Went over fully with them the matter of plans; showed them that the plans were finished up to date, and that I was going faster than Deyo, but that I thought that Deyo was going fast enough. Told them that I thought, if there was any falling back, it was not a matter of excavation, and that I thought they should have made reports to them monthly showing the amount of work that the Contractors were required to do in order to complete the construction on time, and then the amount of work which was actually done, by which they could tell at a glance whether the Contractor was going ahead or behind the required average. Told St. John Clarke to increase his force by two extra draftsmen.

Aiken was in town and reported that the results on quickening the setting of the Portland cement were not proving very satisfactory, as the results were somewhat irregular. He also reported that he made some experiments by using salt brine, but found that the strength at the end of 24 hours was reduced to about one-third, but even then the results were rather more satisfactory than by using quick-setting cement.

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D E C E M B E R 18, 1900.

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Went over all of Klapp's Division.

Mr. Vanderbilt called in the afternoon to look over our records and methods of keeping track of the quantities. Was very much interested.

Comptroller Coler also called, bringing Mr. Van Vleck a single-taxer, who was to enter in debate in Brooklyn on the Rapid Transit question, opposition having sprung up in Brooklyn to the Comptroller's course.

Deyo also called and discussed various matters.

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D E C E M B E R 19, 1900.

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Routine work.

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D E C E M B E R 20, 1900.

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Attended a meeting at 12 o'clock of the Railroad Commissioners in Brooklyn in regard to the Brooklyn Union Transportation Company's proposed tunnel. Gave testimony to the effect that, in my judgment, the tunnels could be constructed, but as to whether they would interfere commercially with the Rapid Transit Road I was not prepared to express an opinion.

Mr. Vanderbilt called in the afternoon and discussed the question of the route down Broadway

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D E C E M B E R 21, 1900.

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Went over Value's work in the morning and found that no excavation had been done at 135th Street. Raised a great row with Olmstead and later with Mc Cabe, the latter promising to begin next week as soon as he got boiler free. Found at the end of the tunnel more loose rock; Mc Cabe promised immediately to timber it.

In afternoon Deyo called and discussed sundry matters.

In the evening was at a dinner given by Dave H. Morris at the Metropolitan Club. Present: White, Mc Donald, Bryan, Wells, Goulden, Holmes, Marshall, Hall, Davies and others.

After dinner the change of line at the Bronx was discussed. I made an explanation of why the crooked line was adopted and as to what I suggested as to the suspended link between Third and Lenox Avenue until the completion of the track in order to see if it would not be possible to get a direct east-side line. Mr. Mc Donald described how, in his opinion and that of his supporters, the present east-side line was a monstrosity. The opinion was divided- some supporting my proposition, others attacking it vehemently as throwing the district into the hands of the Rapid Transit Railway. This I presented was what the present route would do and what I was trying to escape. I was asked whether the Rapid Transit Railroad would offer a continuous 5-cent fare, and whether they would meet my point and realize the necessity for constructing the link? I replied

that it would. Then I was asked whether I would suggest an amendment adding the word "Underground" so as to make the continuous ride an underground one. That I refused as not allowing any latitude for choice. Judge Hall made a violent speech in opposition, and was answered by Wells in my favor. To the surprise of many, as stated to me afterwards, Judge Hall suddenly reversed his position, agreed with Wells but stated that that was not what he thought I meant. I immediately accepted Judge Hall's proposition and apologized for my apparent failure to make myself clear; although those whom I spoke to afterwards said that they did not understand Judge Hall's change of front. Judge Hall then drew a resolution deliberately naming a continuous 5-cent fare by the Manhattan Railway as what the people in the Bronx were after. This I criticised on the same ground that I criticised putting in the word "underground" as I preferred to have my hands left entirely free. Mr. Holmesthen drew another resolution, which, after much amendment, was finally adopted, which was to be presented to the Rapid Transit Board as representing the general views; it being understood and agreed by everybody that a through 5-cent fare by the Manhattan Road would meet the requirements of the district, but that they all wanted to get an underground railroad if possible, and also a line up Jerome Valley. The resolution was passed and the meeting adjourned at 2 o'clock.

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D E C E M B E R 22, 1900.

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Went in the afternoon over the work on Elm Street.

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D E C E M B E R 24, 1900.

Went over Carr's work with Carr.

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D E C E M B E R 25, 1900.

Holiday.

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D E C E M B E R 26, 1900.

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Met Craven at 60th Street. Examined the excavation there. Found the men just beginning a drift under the Columbus Monument.

At 87th Street met Collins who told me that they were going to lay the sub-drain this afternoon and begin concreting this afternoon or to-morrow morning. Then took Craven and Collins to false work at 135th Street to examine the method of building the guard walls and the waterproofing--found no excavation in progress.

At 155th St. in the tunnel found that the rock, at the face, was getting better and that bad ground had apparently been passed, but the work was being progressed with a small heading only. Called the foreman's attention to some rock which was loose but which he thought was solid until he sounded



the same and found it loose.

At 168th St. not possible to go down shaft on account of caged timbers not being completed. Went down 131st St. shaft. Foreman admitted that the rock was not as good as at 168th St., and that he preferred to work with a smaller heading. I told Value to tell Mc Cabe to so do. Had a few words with Mc Cabe about his not proceeding with the excavation. He began to find fault with the orders about the concrete and his being compelled to do things different from the other sub-contractors. His manner seemed to indicate that he did not intend to do any more excavating at 135th Street.

On reaching the office found Mc Donald and Deyo waiting for me. We discussed the question of pipes in 42d Street. They seemed to fear that they would strike the pipes badly with the overhead bridge near Park Avenue, with the roof of the subway at 6th Avenue, and again at 43d Street and Broadway. I showed them that at all points if ample provision had not been allowed for them that it could easily be done by depressing the structure. In regard to the 48" water pipe, advised Mc Donald to write Mr. Orr a letter requesting him to take the matter up with the Department of Water Supply and see if joint action could not be obtained.

Reported Mc Cabe's failure to begin excavation at 135th St. Mc Donald told me that Mc Cabe had promised him to begin on Monday and he would take it up at once and see that excavation had been carried on.

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D E C E M B E R 27, 1900.

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Examined Carr's work from 34th Street down on Elm Street.

Discussed the question of waterproofing with Hornam. The asbestos seemed to me to be very brittle, and the tar paper to be mechanically a much better article. Hornam said that there was enough tar in the tar paper to destroy the asbestos- that such he understood has been the experience of his Company.

At 2 o'clock was called by telephone to Chatham Square to notice a badly-leaking water pipe, due to the fact that a sharp turn had been made with two separate pipes.

Called on the Sicilian Asphalt Company and discussed with Mr. Boltze the use of other materials than asbestos or tar paper. Boltze thought, however, that there was not enough tar in the paper to destroy the asphalt, but admitted that an asphalt preparation would be better than tar. He showed me a woolfelt dipped in asphalt which was stronger and tougher even than the paper and much more so than the asphalt. He promised to investigate the various articles in the market and let me know. In the meantime I told him to flux the asphalt so as to make it a little more plastic in cold weather. He said that this could be done by the addition of 5 or 6 per cent residuum oil, and that, in his judgment, it would be very much better to use the asphalt while the weather was cold.

Notified the Division Engineers verbally that we were not getting the satisfactory article for quick-setting cement, and that in cold weather they were to make use of salt.

D E C. 27 (Continued)

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Had a conference in Shepard's office with Wickersham and Deyo and Shepard in regard to the use of vaults. It was finally decided that the Rapid Transit Board should serve notice on all vault owners that their property would be taken, and then that the Contractor would be at liberty to make use of private arrangements <sup>to reduce interference</sup> as he liked, and then if the vault owners and the Sewer authorities would not object, the pipes could be run through the vaults,- legal questions involved being thus postponed.

Long discussion followed upon the City Hall loop, I pointing out that, inasmuch as the Fort George extension was being held up, the City Hall loop would probably share the same fate, and that if it was defeated it would be impossible to complete the City Hall loop by the same time the rest of the construction would be completed, and I proposed to place myself on record in writing to that effect. After the meeting I asked Shepard if he had any objection to my speaking to Wickersham personally to get his people to alter their view of the case and treat the City Hall loop as a detail. He told me that he had no objections whatever.

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D E C E M B E R 28, 1900.

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Routine work.

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D E C E M B E R 29, 1900.

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Wickersham called and we discussed the possibility of constructing the Post Office Loop by some means other than going through the Municipal Assembly. A simple resolution was adopted, which he took away with him and promised to write a letter accepting the same. He said he was willing to accept almost any scheme that did not involve on the part of the Board an admission that they doubted their own powers.

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D E C E M B E R 31, 1900.

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Accompanied by Rice, Clarke, Carr and Klapp and Deyo, went to Jamaica to examine the track which was nearly finished. The criticism that seemed to impress everybody was the necessity of being very careful in finishing the surface of the concrete and the cutting of blocks of a uniform size. Instructed Abernathy to go over the work and have it surfaced better. The track rode well, except <sup>that</sup> the slight inequalities of the surface made the engine roll.

Called on Shepard and had a long discussion with him in regard to following out Wickersham's suggestion. Shepard said that he thought that he would be willing to agree to have the whole thing proceed as a detail of the work- any instructions to be presented to the Board to be according to the following program:-

First.- Mc Donald to request the Board to omit the Post



Office Station.

Second.- Mc Donald to state to the Chief Engineer that he prefers to build the loop entirely north of the Post Office, which can be done since there is to be no station at the Post Office, and to request the approval of the Engineer from plans to be submitted.

Third.- The Chief Engineer to give approval and submit plans.

Fourth.- Correspondence if desired by Mc Donald to be filed with the Board and spread on its minutes.

Sixth.- The Board to pass no resolutions. Payments to be made in the ordinary course.

Shepard said he would submit these schemes to Rives.

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J A N U A R Y 1, 1901.

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Examined the work at 60th St. Found waterproofing in progress, but broken by drain.

Examined the work on Elm Street and found that a showing had been made with steel erection.

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J A N U A R Y 2, 1901.

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Went to Craven's office and took Craven over the work from 62d St. to 47th St. Had a long talk with Mc Nulty and told Mc Nulty that I was not satisfied with the total amount of excavation being moved. Mc Nulty told me that he himself was not satisfied, and that he had given orders to his people that hereafter they must average 500 yards a day.

Telephoned Rives and told him about my conversation with Shepard. Rives approved of it most heartily and said that he thought that I had better write a letter to the Board absolving myself from responsibility- that unless I did so I certainly would be responsible.

Temperature to-day at 9, 12 and 5 o'clock, 28, 30 and 30 degrees respectively. Weather, clear.

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J A N U A R Y 3, 1901.

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Went over Carr's work with Carr. Found 21 frames erected on Elm Street and work progressing satisfactorily. On Holbrook's work the whole of 29th St. was ready for steel- no work being done. Concreting and waterproofing in progress at 22d St. At 27th St. excavation will shortly be ready for concreting. At 10th St. one steel gang at work. Foreman told me it would take him two weeks of good weather to finish. At Lafayette Place excavation almost ready for concrete; it is quite evident that at least one more concreting gang should be put on, and another steel gang. This Holbrook promised to do. I had a long talk with him and pointed out that he was

not keeping up with the succession of operations.

At the meeting in the afternoon Mc Donald's letter in regard to the 48-inch water main on 42d Street was read. This provoked a good deal of adverse criticism from Boardman and then from Coler, who claimed that the Contractor was simply trying to run in a bill of extras, and that the contract should be adhered to. When the change of line in the Bronx came up, Boardman and Rives were quite vehement, and the whole discussion was quite unpleasant. After the conclusion of the meeting Shepard told Rives that "he thought that the Board's treatment of me had been rough." Rives seemed quite out of sorts and characterized the change of line in the Bronx as "silly." Boardman all through the meeting spoke on all subjects giving his advice freely much to Shepard's annoyance.

Temperature to-day at 9, 12 and 5 o'clock, 12, 20 and 21 degrees respectively. Weather, clear.

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J A N U A R Y 4, 1901.

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Examined Craven's and Value's work as far as 135th Street.

Had a conference with Farrell, who showed me a letter from Deyo, Mc Donald telling him to increase his plant and force and put a night shift in Central Park. He pointed out that practically the only work at that point to do was to lay concrete, and he thought that laying concrete at night in this weather was risky business. He promised me to keep as many men as he could at work on concrete, and get the steel up in Central Park without delay. I will speak to Deyo about putting on night force.

Shepard requested me to call on him, which I did. He seemed worried about the action of the Board the afternoon previous, and said that he would see Mr. Orr and get Mr. Orr kept straight, and that whatever the Board did the Board must act in a dignified manner. He suggested to appoint a committee of the Board to consist of Mr. Orr and one other to take up the matter and report. Advised my speaking to Boardman about his not interfering with engineering matters.

Temperature to-day at 9, 12 and 5 o'clock, 22, 34 and 34 degrees respectively. Weather, clear.

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J A N U A R Y 5, 1901.

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At noon attended a meeting of the Board of Directors of the Construction Company, at which a number of questions were discussed, principally the acquisition of the 104th St. real-estate. It was decided that the Company should acquire this property. They asked me if I did not consider that any damage done to the houses was a proper charge against <sup>the</sup> real-estate, the City having guaranteed the right of way. I told them, "No;" I did not think so- that damaged real-estate was dependent upon the care and construction, and that they were bound by the contract to exercise all care.

Temperature to-day at 9 o'clock, 24 degrees. Weather, clear.

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J A N U A R Y 7, 1901/

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Routine work.

Saw Mr. Orr in regard to the action of the Board on the Bronx matter.

Temperature to-day at 9, 12 and 5 o'clock, 36, 38 and 44 degrees respectively. Weather, cloudy.

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J A N U A R Y 8, 1901.

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At home- not well.

Temperature to-day at 9, 12 and 5 o'clock, 36, 38 and 39 degrees respectively. Weather, clear.

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J A N U A R Y 9, 1901.

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Went over Carr's work with Rives from 34th St. down.

Temperature to-day at 9, 12 and 5 o'clock, 42, 44 and 46 degrees respectively. Weather, partly cloudy.

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J A N U A R Y 10, 1901.

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At Ithaca.

Temperature to-day at 9, 12 and 5 o'clock, 36, 34 and 35 degrees respectively. Weather, rain.

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J A N U A R Y 11, 1901.

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At Ithaca.

Temperature to-day at 9, 12 and 5 o'clock, 42, 42 and 36 degrees respectively. Weather, rain and fair.

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J A N U A R Y 12, 1901.

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At Ithaca.

Temperature to-day at 9, 12 and 5 o'clock, 39, 36 and 38 degrees respectively. Weather, clear.

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J A N U A R Y 14, 1901.

Routine work in office.

Temperature to-day at 9, 12 and 5 o'clock, 29, 36 and 37 degrees respectively. Weather, partly cloudy.



J A N U A R Y 15, 1901.

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In morning went with Rice over Craven's and Value's work. Found the iron work begun for the 60th St. Station, and concretizing in progress at 87th St.

On Value's work met the two Mc Cabs with Kinsley at 161st St. where the tunnel caved in. A crater was showing in the surface of the street about 10 or 12 ft. in diameter, where they said a settlement had occurred 4 or 5 ft. in depth. Found all work at the heading stopped. Mc Cabe told me that they had decided to seek an open cut through soft ground. To this I said nothing, but told Mc Cabe I was surprised that the work had stopped in the tunnel- that they ought to put their men on ~~a~~ once, taking the bench out and trimming the tunnel to the full section; that such work would have to be done anyway and that there was no use in delaying. Colonel Mc Cabe said "tell my brother that," and so I repeated it to the other Mc Cabe. Apparently, there had been some friction between the two, but before I left they agreed that that was the proper course to pursue and that they would put on a double shift ~~a~~ once.

At 110th St. found the base stone being set. Saw Perrine and urged on both Perrine and Value the necessity of getting steel up without delay. Found a large amount of waterproofing exposed without the top concrete, the cause being that they were out of gravel. Suggested to Value that they should lay a layer of 5 to 1 mortar and go ahead with the

J A N U A R Y 15 (Continued)

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stone, as I did not want at this season of the year waterproofing exposed unnecessarily.

Tempearture to-day at 9, 12 and 5 o'clock, 38, 45 and 41 degrees respectively. Weather, partly cloudy.

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J A N U A R Y 16, 1901.

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Went over the work from 60th Street south with the American Society.

Saw Deyo and suggested to Deyo that instead of Bradley beginning at 96th St., he had better begin at about 74th, as the steel plans for the 72d St. Station were more advanced than for the 96th St. Station. Also told him verbally about the letter which I had written to Mr. Mc Donald about the soft bottom at 115th Street.

Temperat ure to-day at 9, 12 and 5 o'clock, 42, 53 and 53 degrees respectively. Weather, cloudy.

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J A N U A R Y 17, 1901.

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Routine work. Instructed Aiken verbally to furnish me a report of the operations of his department for the year ending December 31.

Temperature to-day at 9, 12 and 5 o'clock, 42, 45 and 38 degrees respectively. Weather, cloudy- sleet storm at 5 P.M.

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J A N U A R Y 18, 1901.

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Examined the work with Rives from 47th St. north to 168th St. including 110th. Rives seemed very much pleased.

Cautioned Collins and Craven about leaving the waterproofing unexposed. Told them that they must have the concrete gang follow the waterprooferers closely. Mc Nulty said that they would begin to put in the bottom concrete in the neighborhood of 47th St. next week.

In the afternoon had a consultation with Douglas Robinson; the future proprietor of the new St. Cloud Hotel, and an Architect from Bruce Price. They wanted the platforms extended up to the line of the hotel so as to prevent connection between the hotel and the station platform from ever being cut off. Douglas Robinson said that if this was done the Astor Estate would give the easement under the northeast corner of 42d St.

Temperature to-day at 9, 12 and 5 o'clock, 24, 20 and 16 degrees respectively. Weather, generally fair.

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J A N U A R Y 19, 1901.

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Went with Carr over all the work on his Division. Reported to me that the foreman of the iron-working gang had been attacked by Union men and very severely injured.

Temperature to-day at 9, 12 and 5 o'clock, 27, 30 and 10 degrees respectively. Weather, terrific snow squall at about 11 A.M.; clear in afternoon.

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J A N U A R Y 21, 1901.

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Went to 60th St. Station and went over Naughton's work with Mc Nulty. He told me that he would begin his concreting, weather permitting, on Thursday.

Telephoned Craven to find out what Bradley was doing with concreting. He reported that he had not been able to get hold of Bradley during the day, but no concreting had been in progress, but that a brick wall had been erected. Instructed Craven to keep pushing Bradley on.

Temperature to-day at 9:25, 1:07 and 5 o'clock, 34, 42 and 48 degrees respectively. Weather, generally cloudy.

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J A N U A R Y 22, 1901.

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An explosion was reported at 22d St. Went there the first thing, but discovered that no damage had been done- that the main on the east side of the street, an old one, had been leaking, and that the ground had been saturated with gas which had been fired in the sewer tunnel by a naked light; four men slightly injured.

Examined Carr's Division south from 29th St. where they were laying ducts at 10th St. Instructed Carr to see that the space between the duct and the column was filled with cement while the ducts were being laid up. Instructed Hendrick to confer with Carr about the omission of the sewer in front of the Madison Square Garden, but nothing was to be done unless we got the consent in writing of the owners of the building.

The John's people called with some samples of longer fibre of asbestos paper, which they said were prepared especially for our use, but which had cost them the full amount of the purchase price.

Lunched with Shepard and discussed with him the question of getting the consents of the people in the Bronx. He was of the opinion that it all ought to be condemned; but I showed him that such would probably involve the City in a heavy loss, as I thought we could get more than the majority of the consents, and even if we got a few defective titles we would at least have established a record for the value of the consents as they existed at this time.

Temperature to-day at 9:40 and 2:35 o'clock, 40 and 38 degrees respectively. Weather, generally clear.

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J A N U A R Y 23, 1901.

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Went over Craven's and Value's work. Found the concrete on Craven's work exceedingly rough, and told him that Bradley ought to be very much more careful with it.

Temperature to-day, at 9:25, 12:10 and 5 o'clock, 26, 32 and 35 degrees respectively. Weather, clear.

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J A N U A R Y 24, 1901.

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Routine business.

After the Rapid Transit meeting I spoke to Mr. Smith in regard to his tabling the Bro\_nx resolution for the omission of the link between 3d and 6th Avenues. Mr. Smith said he did not understand my position; was sorry that I felt hurt about it and would recall it for consideration at the next meeting.

Temperature to-day at 9:40, 3:10 and 5:10 o'clock, 34, 40 and 38 degrees respectively. Weather, cloudy.

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J A N U A R Y 25, 1901.

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Went over the work from 42d St. to 59th St. with Bryan. At 42d St. found the test pits down some 15 or 16 ft.;- no signs of rock. At 59th St. Bryan seemed much pleased with the progress of the work and also with its general appearance. On the way downtown he told me that his more recent investigations had shown him that the burden of traffic on the Elevated

Railroad was very much better distributed than he supposed, and that we could count on a greater carrying capacity than he had figured in the first instance. I laughed and told him that was what I told him when he first came.

In the afternoon went over the work from Grand Street to Astor Place with Rives. He told me that he had conferred with Carreré & Hastings about an Architect and that they had asked to be appointed on the basis of a fixed fee and disbursements. They told him that was the arrangement they had had at the Buffalo Exposition where their fee was \$5,000 per annum.

Temperature to-day at 10, 12:40 and 5 o'clock, 34, 36 and 38 degrees respectively. Weather, snow in morning, generally fair later in day.

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J A N U A R Y 26, 1901.

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Accompanied by Mr. George C. Sikes of the Street Railway Commission of the City of Chicago, examined the work from Grand Street to 22d St.

In the afternoon went with Value over his work, going down both shafts. At 121st St. found the side-wall construction in progress,- promised that the centres of the main arch would be put in place on Tuesday.

Bryan called me up in the morning on the telephone and stated that Stillwell wanted a 36-inch wheel on the cars instead of a 33-inch, which would necessitate the elevating of the platforms.

Temperature today at 9:30 and 12 o'clock, 28 and 32 degrees respectively. Weather, clear.

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J A N U A R Y 28, 1901.

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In morning went over Carr's Division from 41st St. to 18th St. Had a talk with him about the question of ducts and told him to report to me by telephone the amount of duct feet that were needed to keep the work going.

Bryan called. Had a long talk with him about the question of equipment. I told him that he must remember that if he raised the floor of his cars the tunnel height could not be increased--that the clearance in the car body itself would have to be decreased, and that I thought that his Equipment Engineer should recollect that any increase in the height of the

J A N Y. 28 (Continued)

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tunnel involved great additional increase in cost, and that he should adopt a compromise equipment even if it involved some extra cost in its construction.      Showed him a profile of the line over the Harlem, which he seemed to think was very good. Discussed the addition of a Third Track on the Boulevard. He said that he was going to ask for four tracks from 106th to 110th St. for storage purposes to be charged to terminals. I told him that it would be much better to ask for a third track to 110th St., which with the three tracks over the Viaduct and through the 137th and 145th St. Stations would give a very fair Third-track Express service on the west side

Temperature to-day at 10:05 and 1:10 o'clock, 32 and 32 degrees respectively.      Weather, cloudy.

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J A N U A R Y    29, 1901.

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Had a talk with Mc Donald over the telephone in regard to the shortage of ducts and asked him to take it up and push the thing forward.

Fisher called and showed me the letter which he proposed to write in regard to the dumping privileges for Sections 1 & 2.      I told him I thought it was a good thing to do, but I would not take any initiative action.

Temperature to-day at 9:50, 2:10 and 5:20 o'clock, 24, 28 and 28 degrees respectively.      Weather, clear.

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J A N U A R Y 30, 1901.

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Examined Value's work at 110th and 123d Sts. Found the concrete side wall setting very slowly. Told Value to let the whole stand for four days instead of two.

Deyo called and showed me a letter which Mc Donald proposed to write to the Dock Department. Had a talk with Mc Donald about it on the telephone and told him to send it in. Explained to Deyo that I would not take any initiative action.

Showed Deyo the Elevated Railroad profile which he said he approved of. Saw George Rives about this and Rives told me that he would vote for it if it came up before the Board- that this new action would obviate his objection to omitting the line joining the east and the west sides.

Temperature to-day at 9:30 and 2:20 o'clock, 30 and 30 degrees respectively. Weather, snow.

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J A N U A R Y 31, 1901.

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Met Carr 22d St. and went over his work on Great Jones. In the afternoon went over Carr's work north from Spring St.

Temperature to-day at 9:50 and 3 o'clock, 28 and 32 degrees respectively. Weather, cloudy but generally fair.

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F E B R U A R Y 1, 1901.

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Went to 60th St. and walked south from there over the Second Division. Found a good deal of concreting in at 50th St. and some in at 48th and the bottom ready for a good deal more.

Rode to 10th St. and met Carr. Examined the work at 10th St. where I found that the concrete was being surfaced with pure cement. Suggested the use of a mixture of 1 to 1.

Carr told me that sample sand which was coming from Shaler's work carried with it a good deal of mica dust. Suggested to Carr to try and arrange with Shaler to have it washed.

Carrere & Hastings called. Had a long talk with them about their duties of Architect. I likened their work as holding the same relations to me that Theodore Cooper did to them in connection with the Library. They told me Theodore Cooper received \$3500 with no allowance for disbursements, and I told them they would not be called upon to give any more time than Theodore Cooper gave to them. I thought that the most satisfactory plan would be for them to suggest an annual fee with disbursements extra. They said that they did not want to put in any fee which would seem wrong to the R.T. Board. I told them to think it over and submit a figure to me and I would talk it over with Mr. Rives.

Temperature to-day at 10:10, 3:10 and 5:35 o'clock, 22, 28 and 28 degrees respectively. Weather, clear.

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F E B R U A R Y 2, 1901.

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Met Carrere and Hastings at Columbus Circle. Showed them the Station and explained the amount of work to be done.

In the afternoon went over Value's work, going down 181st St. shaft. This seemed to be in very good order, roof looking well. Both headings were very dry. Told Kinsley he need put on a third shift at the bench at 158th St. and two shifts on the work at 157th St.

They were getting ready to put in the centres at 121st St. Value explained how he proposed to build his arch by radial blocks beginning at the haunches. Told him to join the walls with square steps instead of on a slope as had been done.

Temperature to-day at 9:20 and 1:10 o'clock, 20 and 26 degrees respectively. Weather, clear.

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F E B R U A R Y 4, 1901.

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Routine work.

Temperature to-day at 9:20, 1:10 and 5 o'clock, 30, 28 and 28 degrees respectively. Weather, storming badly.

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F E B R U A R Y 5, 1901.

---

Went under Pier 34 with Hendrick in the afternoon.

Wanamaker called and discussed with him the question of the easement of his property. Told him that the Board would put in the foundations of a new building and would give him an under passage between the two platforms in such way as he might elect. Told him that we would arrange to pay the Astor Estate and J. Romaine Brown nothing.

It having been reported on Saturday night by J. V. Davies that he had heard from Potter that our track at Jamaica was going to pieces, sent Rice on Monday to make an examination. Rice reported to-day that he examined the track and found it in prime order.

Temperature to-day at 9:15 and 12:30 o'clock, 24 and 25 degrees respectively. Weather, clear.

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F E B R U A R Y 6, 1901.

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Routine work.

Temperature to-day at 9:25 and 5:30 o'clock, 18 and 20 degrees respectively. Weather, clear.

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F E B R U A R Y 7, 1901.

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In morning walked down over Carr's Division. Met Holbrook and Seaman at 10th St. Found that the back of the ducts had just been waterproofed the day before, and that the carpenter was just engaged in measuring for the outside concrete molds.

In the afternoon Carr wired me to meet him at 29th St. Pointed out that water had run in behind the waterproofing in the same place; had frozen in heavy mass of ice, and that the waterproofing was badly damaged. Ordered the places cut out.

Went into both headings at 34th St. Found the work in excellent shape cutting very close to the neat line and no water showing in either roof at any place.

Temperature to-day at 9:25 A.M. and 5:30 P.M., 18 and 20 degrees respectively. Weather, clear.

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F E B R U A R Y 8, 1901.

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Holbrook and Seaman called. I told them that I was not satisfied with the progress they were making, especially in regard to the delay between the various stages of the work. They assured me that it was not their fault; the delays were unavoidable, and that they expected to move from 20,000 to 24,000 yds. in the Spring per month. I told them that they must arrange in some way to close up the old holes as fast as they opened new ones. This they promised to do.

Had a long talk with Seaman afterwards, and tried to im-

F E B Y. 8 (Continued).

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press this point upon him. Seaman seemed dissatisfied with Carr's investigation of the riveting of the steel work. I told him that I thought we had more to complain of than he had.

Fisher called in the afternoon in regard to probable rock line on 42d St. I told him that the test pits and the excavations for the Public Library foundations had shown my borings to be wholly unreliable, and advised him to sink another test pit near 5th Ave.

Temperature to-day at 9:13 and 12 o'clock, 22 and 24 degrees respectively. Weather, clear.

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F E B R U A R Y 9, 1901.

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Routine work in morning. Went to the country in afternoon.

Temperature to-day at 9:30, 2:30 and 5:30 o'clock, 20, 28 and 24 degrees respectively. Weather, snow; afterwards, generally fair.

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F E B R U A R Y 11, 1901.

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Telephoned Value, who replied that on account of the cold no concreting was being done.

Walked down over Carr's Division. Concreting had not



F E B Y. 11 (Continued)

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yet been put in behind the 10th St. ducts. Met Fisher who told me that it would be another month probably before they began on the City Hall Park. Found them taking out the 36-inch main south of Houston St. The roof centres were largely in, and ducts were being put in place rapidly.

Temperature to-day at 9:30, 1:25 and 6 o'clock, 24, 32 and 31 degrees respectively. Weather, clear.

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F E B R U A R Y 12, 1901.

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Holiday.

Most of the Contractors at work. Spent the morning with Value, chiefly on concreting of the arch at 132d St. which was begun this morning. Instructed Value to build it in horizontal layers rather than in alternate ribs.

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F E B R U A R Y 13, 1901.

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Very cold. Walked down over Carr's Division. Found work very much retarded- no concrete or duct work being done.

In afternoon, at meeting of the Assembly on the Brooklyn Extension.

Temperature to-day at 9:30, 2 and 5:30 o'clock, 12, 18 and 14 degrees respectively. Weather, clear.

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F E B R U A R Y 14, 1901.

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Deyo and Degnon called in regard to beginning the work on 42d St. Deyo explained they proposed to do the work if possible by tunneling, but wanted to begin at once between 41st and 42d St., but complained that the steel was not ready. Advised Degnon to sink a large shaft on the south side of 42d St. between 5th and 6th Aves., which could be utilized either for tunneling or open-cut work whichever might be selected after the shaft was sunk. He thought this was a good idea and said he would begin on Monday.

After the conference showed Deyo the plans for the curve at 42d St. and pointed out that the arch work could be continued in cut and cover for some distance north of 41st St., so that Degnon could begin at once without waiting for steel, and suggested that Deyo had better submit this to him as a saving for him (Degnon).

Rapid Transit Board meeting. Called the Board's attention to the fact that we were still waiting for Fort George. Boardman promised to attend to it.

Bruce Price and his Assistant called in regard to the plans for the St. Cloud Hotel. He was very anxious that the Rapid Transit Board should take possession of the vault space up to the building line of the hotel but permit them to build over it.

Temperature to-day at 9, 3 and 6 o'clock, 16, 24 and 22 degrees respectively. Weather, clear.

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F E B R U A R Y 15, 1901.

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Attended a meeting of the Committee of the Board of Aldermen on Streets and Highways, with respect to the Brooklyn Extension. There was no opposition.

In afternoon went over a portion of Mr. Carr's Division.

Temperature to-day at 9:30 and 4:15 o'clock, 26 and 28 degrees respectively. Weather, clear.

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F E B R U A R Y 16, 1901.

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Routine work in morning. Aiken reported in New York.

In afternoon walked with Carr and Deyo over Carr's Division;- was joined by Seaman at 17th St. Told Seaman that I should expect very much better work in the future in the way of promptness, and gave Carr orders to have the work along the excavations kept clean.

Temperature to-day at 11:30, 2:45 and 4:15 o'clock, 28, 38 and 38 degrees respectively. Weather, clear.

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F E B R U A R Y 18, 1901.

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Went direct to Value's work and went over records with him. Went with Value down to 110th St. and found work in Central Park progressing by open cut across the drive owing to the irregularity of the rock. Met Farrell and told him he must arrange to double his force so as to get that work progressing more rapidly.

In the afternoon had a meeting with Pearson, who wanted \$3,000 a year. The appointment committee met with Rives and Langdon. Decided to have La Farge call on Rives. Langdon said that he was opposed to Gibson.

Deyo and Bryan called. Bryan expressed his entire satisfaction with the Jerome Park line.

Aiken in town. At my request he went over Carr's work on the iron inspection, accompanied by Seaman. Told me that the inspection had been none too good and not to think of having anything less efficient done.

Temperature to-day at 9:15 and 6 o'clock, 32 and 36 degrees respectively. Weather, generally fair.

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F E B R U A R Y 19, 1901.

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Went to 110th St. and Lenox Avenue and found decided improvement; work going on energetically. Then went to 120th St. and watched them building the side-walls for the continuation of the arch cut and cover work in front of Teachers' College, and talked with Value as to the next place to start Shields in. Advised that he should continue the work for the Station at 110th St. where there was deep rock cut and a large amount of rock to be removed. Told Value that it would not make any serious difference if he had to wait for the arrival of the steel for the station.

Came down over Craven's work. Found the sewer in 81st St. getting along very poorly, inspector saying that they were short of material to fill in. The sewer was also very dirty. Gave instructions that this work should be cleaned up.

Routine work in afternoon.

Temperature to-day at 9:20 and 12:40 o'clock, 36 and 38 degrees respectively. Weather, clear.

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F E B R U A R Y 20, 1901.

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In morning dictated at my house part of the annual report.

Went to Craven's office and went over his office records, and walked with him over his work south from 65th St. Told him to arrange between his two sub-contractors, Bradley and Naughton, for the transfer of such steel to Naughton as would be required to put in the structure at 47th St. He reported later that Bradley had enough steel on hand and asked for an order for its transfer. Told him no order for its transfer was necessary- that was a matter that he could arrange.

In the afternoon late, walked over Carr's Division as far as 28th St.

Temperature to-day at 12:15 o'clock, 30 degrees. Weather, partly cloudy.

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F E B R U A R Y 21, 1901.

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Went over Value's work at 120th St. and also at 110th St. On account of the cold concreting the arch had been suspended. At 110th St. found work progressing fairly satisfactorily.

Bryan called for luncheon. Discussed with him the Jerome Avenue extension, which he told me his people did not seem to take to very kindly, but Bryan thought they did not properly

F E B Y. 21 (Continued)

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understand it, and that he was to make a report. He also said that Wickersham had given him an opinion that the Board had no authority to grant the sub-stations requested by Mc Donald; and he also doubted whether the Board had any right to grant the use of the third track to be charged to terminal account. Bryan asked me to get Shepard's opinion on the above points.

Temperature to-day at 9 and 6 o'clock, 22 and 24 degrees respectively. Weather, generally fair.

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F E B R U A R Y 22, 1901.

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Holiday. Went to Boston.

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F E B R U A R Y 23, 1901.

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In Boston.

Temperature to-day at 9 and 12:30 o'clock, 18 and 24 degrees respectively. Weather, clear.

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F E B R U A R Y 25, 1901.

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Went over all of Value's Division including the going down the 181st St. shaft, where I found the roof in most excellent condition.

Temperature to-day at 9, 12:40 and 5:30 o'clock, 24, 36 and 39 degrees respectively. Weather, clear.

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F E B R U A R Y 26, 1901.

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Shaler and Carr met me in the office in the morning and discussed the location of a shaft at 41st St. and Park Avenue. I pointed out to Shaler that this proposed location was highly objectionable as it cut off the side-walks and diverted the teams in a way that I thought could not be diverted. Shaler objected to the shaft on the west side of the heading as it would involve extra excavation for which he would have to pay. Pointed out that such additional excavation would amount to 43 yds. only.

Took luncheon with Rives. Told him that something must be done about getting the Legal Department to keep up with its share of the work; that no one was looking after the condemnation for the Manhattan Valley, nothing was being done- and that Boardman was not pushing the Fort George Extension before the Municipal Council. He said that he would see Boardman about it. I told him that I did not want to be writing letters to

the Board, nor apparently criticising the Legal Department. I also talked with him about the building of a third track and having the same included under the cost of terminals, said third track to be built between 103rd and 116th Sts. He thought it a most excellent idea. He told me that Wickersham told him that he (Wickersham) doubted that the Board had the right to build sub-stations as requested.

In the afternoon went over Carr's work with Deyo from 22nd St. north, including both headings of the Murray Hill Tunnel. Had a long discussion on the ground with Shaler about the location of the shaft on 41st St. on the east side of Park Avenue, but arrived at no conclusion.

Temperature to-day at 9 and 5:25 o'clock, 34 and 39 degrees respectively. Weather, generally fair.

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F E B R U A R Y 27, 1901.

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Absent on account of illness. Farrell came to the house and I dictated answers to my mail. In the afternoon took a short walk over part of Craven's work.

Temperature to-day at 9, 12:20 and 4:50 o'clock, 22, 25 and 26 degrees respectively. Weather, cloudy.

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F E B R U A R Y 28, 1901.

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Routine work.

Temperature to-day at 9, 1:05 and 5 o'clock, 19, 24 and 26 degrees respectively. Weather, generally fair.

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M A R C H 1, 1901.

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Took Mr. Worthington over the work examining everything north of 59th St.

I saw Shepard. Had a talk with him about the right to lay out sub-stations in the street, but he said that was a legal matter which would release me from the responsibility of joint report. Talked with him about the use of building the third track between 103d and 116th Sts., the same to be included as part of the terminal expense. His first thought was adverse, but on reconsideration decided that that was probably possible.

Temperature to-day at 9, 12:15 and 5 o'clock, 34, 39 and 46 degrees respectively. Weather, threatening.

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M A R C H 2, 1901.

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Routine work.

Temperature to-day at 9 and 1:20 o'clock, 44 and 48 degrees respectively. Weather, raining at 9, clearing at 1:20.

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M A R C H 4, 1901.

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In morning walked down over Carr's Division. Met McDonald and had a talk with him about the slowness of Holbrook.

Temperature to-day at 9, 12:50 and 5:15 o'clock, 44, 51 and 46 degrees respectively. Weather, generally fair.

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M A R C H 5, 1901.

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In morning examined 60th St. Station and work between there and 42d St. with Mc Nulty and Hendrick.

In the afternoon had a long conference with Deyo and Seeberger, the latter representing the escalator of the Otis Company. Mr. Seeberger explained the escalator that he was about to install in London for the Central London which is to be placed in the lift shafts, which now have a diameter of 30 ft. utilizing two such shafts. I told him that that was not possible in our case; that we had but one shaft in the deep stations, 15 x 32, and that he would have to accommodate his apparatus to that dimension. This he said he did not

M A R C H 5 (Continued)

think he could do.

Discussed with Deyo the 42d St. construction, he telling me that he did not believe that any change in the plans would be made.

I told him that Shepard had advised me that we could construct the third track between 103d and 116th Sts. as part of the terminals, and for him to have Mr. Mc Donald prepare a formal request to be presented to the Board on Thursday.

Temperature to-day at 9, 12:30 and 5:45 o'clock, 37, 38 and 26 degrees respectively. Weather, generally fair.

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M A R C H 6, 1901.

Had a talk with Wickersham over the telephone about the Fort George extension, and also for the preparation of the application for terminals. Wickersham asked in regard to the latter- whether, in the event that hereafter the Company should desire to use that third track as a running track entirely, they would be allowed the cost of the construction to be spent on the terminals elsewhere? I told him that I supposed that they would.

In regard to the Fort George extension, he told me that he had just conferred with Wickersham and Wickersham said that nothing short of a mandamus would answer. He also told me

M A R C H 6 (Continued)

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that the Dock Board had refused their third application for a dump at Pier 28.

Had a talk with Hutchinson who wanted to devolve some scheme by which the amount of his compensation would go on the minutes of the Board.

Harris called in regard to the meetings of the Manhattan Valley Condemnation Committee.

Temperature to-day at 9, 12:20 and 5:05 o'clock, 12, 14 and 15 degrees respectively. Weather, clear.

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M A R C H 7, 1901.

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Routine work.

Board meeting in afternoon. A delegation of the Bricklayers' Union appeared before the meeting objecting to the use of concrete and asking that orders should be issued that the electric ducts be laid by bricklayers and not by masons. After meeting was over notified Deyo.

Walked up town with Rives and examined Carr's work.

Temperature to-day at 9, 12:20 and 5:30 o'clock, 22, 30 and 34 degrees respectively. Weather, clear.

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M A R C H 8, 1901.

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Went to Starin's house with the locomobile at 9 o'clock, he having told me that Belden, representing the Manhattan Hotel, had been to him with a complaint. Took him over the line at 42d St. and explained to him that the Station has not yet been designed. Gave him copies of my correspondence with Belden and Hawk. I then took him up to the 59th St. Station and down over Broadway to 42d St. He seemed very much pleased with the progress.

In the afternoon had an inspection trip with the Division Engineers over Carr's Division. Instructed Carr to see Fisher about putting on an extra force of concreters and to have the work of filling in at 10th St. more vigorously pushed. Hendrick told me that the Sewer Department had given orders to stop the laying of sewer at 12th St. because connections of 12-1/2 ft. were not being put in. Told Hendrick to proceed to put in only those connections which he found- either blind or actual.

Temperature to-day at 9, 12:55 and 5:40 o'clock, 35, 48 and 44 degrees respectively. Weather, generally fair.

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M A R C H 9, 1901.

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Went over the 54th St. sewer and ordered the Inspector to have the work cleaned up on the side, and the driveway on the northside between Broadway and 7th Avenue opened up.

Walked up to the 60th St. Station where Mc Nulty and Ridgeway called my attention to the crumpling of the water-proofing and overflowing of concrete on the platform. Made a careful examination and could not see that the side walls had moved forward--in fact, the side columns were inclined inward at the top rather than at the bottom. Instructed Ridgeway to make careful surveys so as to determine the positions of all the columns and note from time to time if any movement was taking place. Craven reported later in the day that the side-walls had moved forward about one inch, and that he now secured them by braces.

Carr reported that practically no work was being done by Holbrook on the walls and roof at 22d St.

Temperature to-day at 9 and 1:38 o'clock, 48 and 49 degrees respectively. Weather, raining in afternoon.

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M A R C H 11, 1901.

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Bad storm; heavy rain.

Had a conference between Deyo, Holbrook and Seaman in regard to the general condition of the work on Holbrook's contract. He promised to close up the 22d St. hole at once, and to put on an extra force wherever I could point out to him that such a thing was possible, and to arrange to double his force as soon as he was sure that the winter was behind us.

Temperature to-day at 9, 12:50 and 5:10 o'clock, 52, 51 and 48 degrees respectively. Weather, as above stated.

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M A R C H 12, 1901.

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Rice, St. John Clarke, all the Division Engineers, and Deyo met at the office of the Locomobile Company and made a general inspection of the work north of 43d Street.

Temperature to-day at 9, 12:25 and 5:30 o'clock, 38, 39 and 42 degrees respectively. Weather, generally fair.

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M A R C H 13, 1901.

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Met Hendrick at 22d St. sewer and ordered a night force put on. Then went over Holbrook's work with Holbrook and Carr. Suggested to Holbrook that his work could be expedited and

M A R C H 13 (Contnd.)

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made more economical for him by filling in the roof arches at the side, blocking up the pipes, and removing the timbers;- it would also make the work look a great deal better. At 10th St. found that the men were backfilling by throwing the backfilling over the timbers largely increasing the expense. At 19th St. pointed out to Holbrook that the concreting of the roof was not being done; also that the steel work was behind. In regard to the former Holbrook said that the matter would be taken up at once; in regard to the latter, he said that they were having difficulty in getting sufficient non-union men.

In the afternoon examined Carr's work on Elm St. and Lafayette Place.

Temperature to-day at 9:55, 12:05 and 5:20 o'clock, 39, 44 and 40 degrees respectively. Weather, generally fair.

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M A R C H 14, 1901.

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Went over Craven's work with Craven. Found concreting starting up at 88th St. Had a talk with Bradley and told him that I must insist on his making at least 1,000 yds. a day after this. He said that he would do at least that amount and probably more, but I told him that in order to accomplish it he must put on two shifts on his rock work, and I gave positive orders to Craven that this should be done.

Rapid Transit meeting in afternoon.

Temperature to-day at 9, 12:10 and 6 o'clock, 42, 44 and 42 degrees respectively. Weather, clear and raining.

M A R C H 15, 1901.

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Took Mr. C. Vanderbilt over the work from Grand St. north to 168th St. He expressed his entire approval of the method during which the work was being handled and progress shown.

Instructed Value to have a night force put on Shield's work on the heavy rock; also discussed with him the lining of the tunnel north from 168th St. Instructed him to ram solid with concrete away up on the haunch, but where there would be space enough above the neat line of the arch for dry packing, to put in dry packing, otherwise to ram it full of concrete.

Had a conference with Holbrook in regard to leaving in the pine ridges beneath the columns. This I had declined to do, but told him if he would give the grouting a chance to take a preliminary set that he could grout in then and put in the concrete without waiting for a permanent set.

Temperature to-day at 9, 12:35 and 5:15 o'clock, 40, 41 and 42 degrees respectively. Weather, threatening.

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M A R C H 16, 1901.

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Received a telephone message from Captain Flanagan's office (after repeated inquiries, not having heard from him) saying that Captain Flanagan had been away but that the sender of the message had notified Captain Flanagan by wire and Capt. Flanagan would call here.

M A R C H 16 (Contd.)

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Made inspection of the whole of Hendrick's work and found things generally in very satisfactory condition.

Temperature to-day at 9 and 12:45 o'clock, 35 and 36 degrees respectively. Weather, cloudy.

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M A R C H 18, 1901.

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Had a talk with Bryan in regard to the Jerome Avenue Extension. Bryan asked me to have a talk with Belmont. Saw Belmont. Belmont said that he thought it was a good thing and authorized me to proceed with it in any way that I pleased. The method that I suggested to him would be to get men like Wells to suggest it to the Board. Proposed to Mr. Orr over the telephone that he should see the Mayor in regard to getting the Mayor to use his authority with the Municipal Council. He said he would do so after the next meeting of the Council.

La Farge called and discussed things in general, the masonry of the Manhattan Valley Viaduct in particular. He suggested not having any chisel draft around the stone at all, but instead to use very large stones with a rock face.

Temperature to-day at 9, 12:15 and 5:30 o'clock, 40, 50 and 48 degrees respectively. Weather, clear.

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M A R C H 19, 1901.

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Captain Flanagan of the Hotel Marie Antoinette called at my request. Explained to him the object of putting the stairway in front of the Hotel Marie Antoinette corner as against the southwest corner. At his request gave him a diagram of the stairway, which he said he would lay out on the sidewalk. I told him that the plans were now completed and that we were anxious to forward the plans to the shops. He promised to give me an answer by telephone at once.

Took La Farge over the work from 53d St. north, then spent the rest of the afternoon with Value on details of his Division.

Temperature to-day at 9, 12:30 and 5:10 o'clock, 45, 50 and 47 degrees respectively. Weather, clear.

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M A R C H 20, 1901.

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Met Carr at 41st St. Went down the northwest shaft. Found the rock hard at the bottom, but very soft at the top requiring heavy timbering. Walked over the rest of his Division as far as 8th St.; found general progress.

Temperature to-day at 9, 12:45 and 5:15 o'clock, 38, 40 and 40 degrees respectively. Weather, raining.

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M A R C H 21, 1901.

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Rained hard in the morning but walked over Carr's Division from 8th St. south.

In response to telephone call from Mr. Orr, went over to his house and discussed with him the matter of hearing before the Aldermanic Committee. Gave him an estimate of a million and a quarter as the approximate cost per mile of 2-track subway.

In evening went down to examine what work was going on at



M A R C H 21 (Contd.)

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night between 41st and 65th Sts. Found the lanterns set with watchmen and everything in good condition.

Temperature to-day at 9, 12:45 and 5:35 o'clock, 46, 48 and 51 degrees respectively. Weather, generally fair attended with rain in morning.

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M A R C H 22, 1901.

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Went over Craven's work hurriedly, and Value's work in greater detail, especially in regard to the explosion at the 181st St. shaft, the cause of which Value was unable to report accurately.

Had a talk with Bradley who said that he was going to increase his force on the 1st of April. Told him I would hold him up to one thousand yards a day which he promised to furnish.

In afternoon, at Mr. Orr's request, attended a meeting of the Municipal Council on the South Brooklyn hearing.

Temperature to-day at 9, 12:15 and 5:15 o'clock, 40, 44 and 46 degrees respectively. Weather, generally fair.

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M A R C H 23, 1901.

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Absent in Atlantic City.

Temperature to-day at 9 and 12:30 o'clock, 41 and 47 degrees respectively. Weather, clear.

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M A R C H 25, 1901.

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Walked down on Carr's Division. Routine work in the office, except that, with Shepard's approval, suggested to Evans that Mc Donald should write a letter to the Board offering to become a bidder for the Brooklyn contract, and that if the contract were awarded to him that he would operate the same on a continuous fare.

Temperature to-day at 9 and 12:30<sup>and 5:30</sup> o'clock, 46<sup>49</sup> and 49 degrees respectively. Weather, cloudy and turned to rain.

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M A R C H 26, 1901.

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Went over Craven's work with him between 65th and 88th Sts. Complained about the force that Bradley had at work. Told Craven he must insist on more concreters being put at work, and a night force on rock work south of 65th St.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 45, 46 and 46 degrees respectively. Weather, raining.

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M A R C H 27, 1901.

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Routine work.

In the evening made an inspection of 4th Avenue from 24th to 29th, and 42d Sts. Found night shifts at work at 21st and 29th Sts. Both shifts were small and not working very energetically. On 42d Street found a stiff force at work by the Reservoir, but nothing at 41st St. Night clear.

Temperature to-day at 9, 12:40 and 5:10'clock, 46, 50 and 50 degrees respectively. Weather, cloudy and clearing.

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M A R C H 28, 1901.

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Accompanied by Wm. Ham Hall we spent some time at 110th St. and Lenox Avenue. Found the work ready for backfilling. Then took a quick run over Value's Division south of 130th St., and Craven's Division to 47th St. Told Value to arrange to take the centres down from the arch at 120th St. on Saturday.

Temperature to-day at 9, 12:45 and 5 o'clock, 36, 37 and 35 degrees respectively. Weather, cloudy.

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M A R C H 29, 1901.

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Met Carr at 41st St. and walked down over his Division in detail. Carr informed me that Holbrook had made overtures to him to take charge of their work. I told him that, while I should be very sorry to lose him, the work would be benefited by his taking charge of Section 3, and I would give him leave of absence for one or two months and appoint an active man in his place.

In afternoon Craven called. Proposed to Craven the use of hollow brick for the back walls. Maurer's agent called and submitted some samples of hollow brick and said he would submit other samples, and he thought at prices that would meet Haverstraw bricks. He said he could deliver the ordinary hollow brick, of the same size as Haverstraw at \$8 per thousand delivered on the work.

Temperature to-day at 9, 12:40 and 6 o'clock, 34, 38 and 40 degrees respectively. Weather, clear.

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M A R C H 30, 1901.

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Spent nearly the whole of the day with Value, especially on the centres of the arch at 122d St. It appears that in ramming the concrete the centres rose at the crown about one-hundreth of a foot cutting the inside in slightly large haunches. This made cutting out of the centres very difficult as they did not drop when the wedges were released but

M A R C H 30 (Contd.)

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had to be jacked down. The concrete stood this treatment without showing the slightest sign of failure.

Examined some bad ground with Ridgway on Division 3 at 88th St. and advised an extra layer of concrete, 6 inches in depth, and the digging out of all soft pot holes and the drying of the surface with the use of ashes.

Temperature to-day at 9 and 12:30 o'clock, 36 and 39 degrees respectively. Weather, clear.

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A P R I L 1, 1901.

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This morning a representative of Goss & Edsall Co. called with some other samples of hollow brick. He offered to deliver the hollow brick, of the Haverstraw size, at about \$7.50. Said that the Haverstraw bricks were now costing \$7, but that he could submit what is known as a Partition block, very much larger in size, at a cost that would meet Haverstraw price.

Had a talk with Carr in regard to the use of a fine sand tested by Aiken and Burr, showing that this fine sand gave excellent results. Told him to allow the use of the sand, and to take some specimens from the mortar blocks in making briquettes for a 7-day test.

Afternoon, Trustees meeting, Columbia.

Temperature to-day at 9, 12:30 and 6 o'clock, 42, 46 and 48 degrees respectively. Weather, clear.

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A P R I L 2, 1901.

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Yesterday morning went to 110th St. Disappointed to find a large amount of work in concreting the roof was still to be done. Saw Farrell and he promised to get out of the Park by putting on extra forces.

Went over Craven's work with Craven. Was informed that when the grades are established as instructed there will be difficulty in taking care of the pipes at 49th St. and Broadway. Craven told me that he had not realized that they were working so close.

In afternoon went over Carr's Division with Carr.

Temperature to-day at 9, - and 5:50 o'clock, 46 and 48 degrees respectively. Weather, clear.

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A P R I L 3, 1901.

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Raining hard. Spent the day in routine work.

Took the request of Haffen, et al. in regard to change from Tunnel to Bridge on Harlem River, to Rives for a conference. Rives said that he was generally opposed to it on the ground that he did not wish to stir up the Municipal Council. Furthermore, he was opposed to more Elevated railroads. Had a talk with Mr. Orr who seemed rather to favor it.

Niles called to say that he was opposed to Elevated railroads, and for his part would just as soon wait and take his chances for an underground.

Temperature to-day at 9, 12:30 and 5:50 o'clock, 44, 46 and 49 degrees respectively. Weather, raining, and later clear.

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A P R I L 4, 1901.

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Rapid Transit meeting. Under advice of Shepard, the Board directed me to write a letter to Dalton stating that, by instruction from the Board, I would cut the 30-inch main at Columbus Circle on a fixed day. On communicating this to Mr. Mc Donald, Mr. Mc Donald replied that he understood the whole matter was referred to the Corporation Counsel who would take immediate action. Mr. Mc Donald requested that the matter therefore should be suspended until Monday pending action by Mr. Whalen.

Temperature to-day at 9, 12:30 and 5:15 o'clock, 44, 46 and 44 degrees respectively. Weather, raining.

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A P R I L 5, 1901

In morning walked down over Carr's Division.

Engaged rest of day at office, routine work.

Temperature to-day at 9, 12 and 5:10 o'clock, 44, 50 and 49 degrees respectively. Weather, Cloudy.

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A P R I L 6, 1901

Went over Value and Craven's work in afternoon, going down 168th Street shaft.

Temperature to-day at 9, 12:45 and 4:30 o'clock, 48, 48 and 44 degrees respectively. Weather, raining.

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A P R I L 8, 1901

Went to Craven's office in the morning. Took him over Bradley's work in detail. Saw both Bradleys and complained to them about the progress of the work, that not sufficient work was being done on the rock. Told him that, unless there was a decided improvement this month, I would cut down the estimate at the end of the month, and that also another concrete gang should be put to work. Accepted a sample of granite for footing stones.

At the Hotel Marie Antoinette met Flanagan, who complained about the pile of dirt and that the street was being cut off. Ordered Craven to have the dirt cleared away and a breach put across the street.

Temperature to-day at 9, 12:55 and 5:55 o'clock, 48, 49 and 55 degrees respectively. Weather, Cloudy.

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A P R I L 9, 1901.

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Walked down over Carr's Division. Found work getting on better.

Holbrook told me he was considering appointing Carr, and thought that he and Carr had about arranged on terms.

Temperature to-day at 9, 12:55 and 5 o'clock, 46, 48 and 46 degrees respectively. Weather, cloudy.

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A P R I L 10, 1901.

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In the morning went to 59th St. where I met Judge Mc Mahon and Mc Donald. Mc Mahon told me that he had been unable to do anything about the water pipe, and thought that we must make a fight. Mc Donald advised going slow. I told Mc Donald that the work was his, and that I wanted both he and Mc Mahon to understand that I was prepared to take action.

Went over Value's work in the afternoon. Looked up Farrell at 110th St. and Central Park and complained about the work not progressing fast enough. Told him that he must arrange to get out of the park and restore the driveway. Instructed Value to see that the sidewalk on the Boulevard Lafayette was restored.

In going down over Craven's work found that the dirt had not been removed in front of the Hotel Marie Antoinette. Telephoned Rice in the evening to stop in the morning and see Craven and have it attended to.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 44, 48 and 46 degrees respectively. Weather, cloudy.

A P R I L 11, 1901.

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Walked down over Carr's Division. Found work on Holbrook's section proceeding considerably more energetically. Met Belmont and Mc Donald walking over the work; also Degnon. Told Degnon that if he would promise to work the men after 11 P.M. on 42d Street, I would try to get the Board of Health to extend the working time. This he said he would do.

Told Mc Donald that I did not like the way in which he treated the Board in regard to the water pipe at 59th St.; that at his request the Board had passed a forcible resolution and that he was not taking any advantage of it. He told me that he had just received word from Dunn that Dalton, Water Commissioner, had told Dunn to tell Mc Donald that he (Dalton) had never heard anything at all about the matter- that the whole thing had been handled by subordinates, and that he promised to have the matter straightened out immediately.

After the Board meeting the West Farms people called, and I advised them not to make application for extension of the Jerome Valley line to West Farms.

Examined Degnon's work on 42d St.

Temperature to-day at 9, 12:30 and 5:40 o'clock, 45, 55 and 48 degrees respectively. Weather, clear.

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A P R I L 12, 1901.

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Routine work in morning.

Examined the Murray Hill Tunnel at both ends with Carr in the afternoon.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 48, 62 and 58 degrees respectively. Weather, clear.

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A P R I L 13, 1901.

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Deyo called in the morning in regard to the order for shipments to the various stations. We decided to send St. John Clarke to Pittsburg.

I told Deyo that I felt that Mc Donald had not treated the Board quite right in the matter of the 59th St. Water Main, and then dictated a letter in Mr. Deyo's presence.

Took Mr. Orr over all the work, including a trip up Jerome Valley. He expressed his approval of an Elevated scheme up Jerome Valley, and also his approval of the general progress of the work.

Temperature to-day at 9 and 12:30 o'clock, 52 and 63 degrees respectively. Weather, clear.

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A P R I L 15, 1901.

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Walked down over Holbrook's work as far as 10th St.

Called on Charles Barney at his request, in regard to possible damage to his house at 38th St. Mr. Barney asked me how the work was progressing? I told him, satisfactorily, except Section 3. He told me if Mc Donald did not respond to any request that I made, to let him know.

Temperature to-day at 9 and 12:30 o'clock, 48 and 49 degrees respectively. Weather, cloudy and raining later in day.

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A P R I L 16, 1901.

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I was informed by Moxley that there was trouble with his boilers that he had placed in No. 32 Lafayette Place, in order to release the boilers from the vault which was necessary to occupy. Took the matter up with Mr. Foyé of the Department of Highways, and he promised to get it straightened out.

Took Rice over Craven's work between 59th and 87th Sts.; Craven being ill could not accompany us. Found at 65th St. concrete being shoveled in on wet ground. Told Bradley I was not satisfied with the work on this Division and that he must give it his personal attention to crowd things along. Ridgway was with us and reported that Bradley was increasing his force at 59th St., 3 bents of 4-track steel riveted erection having taken place yesterday. At 88th St. found 3 bents

M A R C H 16 (Contd.)

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erected but not riveted. Found the section of hollow-brick wall up looking exceedingly well; Ridgway said that the Contractors preferred to lay it rather than the ordinary brick. Notified Carr over the telephone that he might get from Goss & Edsall some sample bricks for Holbrook to lay as a test.

Temperature to-day at 9, 12 and 6 o'clock, 48, 52 and 53 degrees respectively. Weather, raining hard.

*Carr informed me that he had declined the offer of Holbrook, Cabot & Daly, stating that he preferred to remain with the R.R. Staff.*

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M A R C H 17, 1901.

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Took Bishop of the Commercial Advertiser over the work from 47th St. He seemed very much pleased.

At 120th St. Value called my attention to the leaks in the concrete arch due to the flooding.

Temperature to-day at 3 and 5 o'clock, 60 and 57 degrees respectively. Weather, clear.

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M A R C H 18, 1901.

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Called Rice's attention to the concrete arch at 120th St. Told him to investigate.

Board meeting.

Temperature to-day at 10, 3 and 5:30 o'clock, 46, 58 and 44 degrees respectively. Weather, cloudy.

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A P R I L 19, 1901.

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Took Commissioner Smith over the work from 41st. He seemed very much pleased with the progress. After he had gone, examined the arch at 120th St. and found it to be in better condition.

Attended with Mr. Orr a meeting with the Mayor in regard to Fort George. The Mayor said he would do what he could to bring the Council to a vote.

Had a conference with Belmont in the afternoon. Mr. Belmont expressed his regrets at the dropping of the Jerome Avenue line, and said that he felt so strongly that this line should be built that he would be willing, if arrangements could be made, to build this line with his own money, giving the City an option of purchase. He also spoke in favor of building three tracks continuously on the Boulevard from 104th to 137th St., locating a line on the Boulevard between 137 and 145th St.

Temperature to-day at 10, 12:50 and 5:10 o'clock, 46, 49 and 49 degrees respectively. Weather, cloudy.

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A P R I L 20, 1901.

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Routine work.

Temperature to-day at 9, 1:30 and 5:40 o'clock, 48, 51 and 50 degrees respectively. Weather, cloudy.

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A P R I L 22, 1901.

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Walked over all of Carr's Division with him in the morning. Found Holbrook's work proceeding very satisfactorily, but total absence of energy on Section No. 2. Deyo called in the afternoon, and I took this question up with Deyo and he said that he was cognizant of that fact, and also Bradley's deficiencies- that he was arranging to take the upper two blocks of Bradley's work from 102d to 104th St. and give them to Farrell, and also to make other arrangements which he was not prepared to discuss, and added that he was after Degnon and Mc Lean. He told me that it looked as if Naughton would complete their section by October, 1902. He said that Mc Donald was not in favor of appearing before the Board on Thursday with a 3-track arrangement, but he would do so if I advised him. I told him I did advise it, or, at least, that Bryan, Taft or Deyo should be present.

At 4 o'clock A. C. Hottenroth, Councilman, called and I discussed with him the possibility of building an underground road from 149th St. to Jerome Avenue, along Cromwell. He said that he thought it would pass the Council. In regard to



A P R I L 22 (Contd.)

Fort George business, he said that the trouble in the Council was they were afraid that any such variation would break the existing contract, but if the Corporation Counsel would assure them that that was not the case he thought the trouble could be gotten over. In any event, he said he would see Chairman Oakley of the Committee and let me know later.

At 5 o'clock went to Shaler's office and examined both headings at 34th St. work. Told Shaler he would be better off to drive his headings on as fast as he could all summer and not begin to put in the linings until the autumn. This advice he thought was good and said he would follow it.

Examined the work on 42d Street.

Temperature to-day at 9, 12:40 and 5:20 o'clock, 54, 58 and 62 degrees respectively. Weather, generally fair.

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A P R I L 23, 1901.

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Had Craven meet me at 41st St. and with him went over all his section. Told him that he must crowd on Bradley and give Naughton all the encouragement he could. Mr. Rice subsequently reported to me at the office that he found that Inspectors on this Division were not supplied with specifications, and that the concrete was going in dry. Told Rice to give this special attention and drive the work.

Temperature to-day at 9, 12:30 and 5:20 o'clock, 52, 56 and 52 degrees respectively. Weather, cloudy and raining.

A P R I L 24, 1901.

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Worked on the annual report at the house.

Went over Value's work and told him that there would probably be a change from two to three-track between 116th and 137th Sts.

Mr. James Foster called at lunch time to discuss the making of an entrance to the 14th St. Station at or near 15th St.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 49, 52 and 48-degrees respectively. Weather, raining.

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A P R I L 25, 1901.

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Met Taft and Nicoll at Mr. Orr's office to discuss the making of a 3d-track at the Boulevard in the Freight Yard at 145th St. At the Rapid Transit hearing in the afternoon Mc Donald appeared with Nicoll and Deyo and presented a request for the same. The Board decided that 6 votes were required. There being only five Commissioners present, no action was taken. The Board decided informally, however, that they would support it, if other votes could be obtained. Suggested to Mc Donald to go ahead and throw the surface track out sufficiently far to accommodate the 3-track masonry; then to stop other construction work and to wait for six Commissioners to be present.

Temperature to-day at 9, 12:15 and 5:30 o'clock, 50, 54 and 53 degrees respectively. Weather, raining.

A P R I L 26, 1901.

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Walked down over Carr's Division.

Deyo called and spent a large portion of the morning discussing the 3d-track arrangement on Broadway. He said that Mr. Mc Donald did not wish to stop the work until the question of moving the Metropolitan tracks had been settled; also said that the Mayor had told Mc Donald that he would act before the 3-track arrangement. After much ineffectual telephoning, failed to get a meeting of the Railroad Committee of the Council to vote on Fort George. Deyo said that he thought that the work that Mc Cabe had done at 135th St. could be moved and save the tearing down.

Heins called in the afternoon and discussed with him details of stations for the Manhattan Valley Viaduct.

Temperature to-day at 9, 12:30 and 6:20 o'clock, 50, 64 and 60 degrees respectively. Weather, clear.

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A P R I L 27, 1901.

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Routine work in the morning.

In the afternoon went over Value's Division, including 168th St. shaft, with Value and Rice. Gave orders to the Engineer in charge for Naughton & Company, in throwing the Metropolitan track between 122d and 125th St., that they should throw it about five feet more- that plans would be sent to them. Value told me that, as soon as Shields learned that there was any likelihood of the concrete being thrown out, he at once put on an extra gang to rush it.

Temperature to-day at 9, 12:30 and 4 o'clock, 59, 69 and 68 degrees respectively. Weather, clear.

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A P R I L 29, 1901.

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Had Carr meet me at Astor Place and walked down over his Division from that point south. Told Carr that I wanted the work from Astor Place to Prince Street completed at once; that here was a long stretch that had been opened a long time, and that a little energy would seem to complete it.

On arriving at the office sent for Fisher and told him the same thing, so far as his contract was concerned. Fisher replied that they had intended to do it, and that they would increase the forces and devote as much energy to complete it as possible. I also lectured him severely in regard to the non-compliance with order in regard to the bridge north from Bond St.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 58, 72 and 68 degrees respectively. Weather, clear.

A P R I L 30, 1901.

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Craven met me at the Locomobile Shop and we then went over the whole of his Division. He told me that the Bricklayers had struck on Naughton's work; that Bradley had told him that he had about eight more trusses and would develop his work with that additional amount of plant.

Met Value at 104th St. and Central Park, West. Went down his shaft; found that the top of the tunnel was to grade for the low section, but was being taken out rather full at the haunches, allowing for a high arch for Station. Cautioned Value against doing this. At the Park found that Telford pavement had been laid according to the wish of the Park Department, and that Roa Hook gravel was expected *to-night*.

Went over the work being done by Rodgers between 131st and 132d St.

Routine work in the afternoon. Temperature to-day at 9, 12:35 and 5:10 o'clock, 64, 78 and 78 degrees respectively. Weather, cloudy.

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M A Y 1, 1901.

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Met Carr on His Division and walked over it from 30th St. to Astor Place. At 27th St. he pointed out to me that one of the roof arches had been found cracked. I told him to test it with water to see if it leaked. He asked permission to change the requirement of the concrete so as to preclude the use of course stone, at least under the track;- to this I gave my consent.

Trowbridge called in regard to the building at the north-east corner of 42d St.

Temperature to-day at 9, 12:45 and 5:45 o'clock, 60, 64 and 57 degrees respectively. Weather, raining and cloudy.

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M A Y 2, 1901.

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Worked with Farrell at house on annual report.

Routine work in the afternoon, and Board meeting.

Temperature to-day at 9, 12:45 and 5:55 o'clock, 47, 62 and 58 degrees respectively. Weather, cloudy.

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M A Y 3d, 1901.

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Examined the work on 42d Street, and at 47th St. and Broadway.

At 2:30 attended a meeting of the Railroad Committee of the Common Council on Fort George, all of which seemed to be very satisfactory, except in the case of Councilman Francesco who stated publicly that he would vote against Ft. George until the Railroad Committee promised to vote in favor of Brooklyn. He was asked by a body of citizens what route he preferred? He stated he preferred the route laid out by the Rapid Transit Board, exactly.

At 5 o'clock took the train with La Farge for Boston. Examined Boston Subway at night. Saturday examined the details of the Subway with La Farge discussing the various architectural features. Found the stairway threads all covered with masonry threads. In the afternoon went over the Elevated Railroad, which worked very well, experimental trains running at the south end of the line. Then went through the work of the East Boston tunnel. This work was being done with a shield, in stiff blue clay. The shield was driven semi-circular resting on the concrete side wall which was built in trenches ahead of the work. The shield heads went forward at lengths of 2-1/2 ft., two lengths to a day's work. Two shifts were employed working 11 hours each, men being paid 15 cts. per hour. The contract price was 5 cts. a yard for excava-

M A Y 3d (Contnd.)

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tion, and 12 cts. for concrete covering all of the plant. The concrete arch was 2 ft. 9 inches in thickness; the proportions of concrete were 1, 2-1/2 and 4. The concrete leaked a good deal at the joints; was informed, however, that these leaks were gradually diminishing. There was also quite a shrinkage from cracks. The most important of these was in the open cut portion of the inclined approach where the concrete had cracked, and the cracking had cracked the granite facing. The Open Cut approach, and the Cut and Cover arch approach, were done by the National Contracting Company, at \$1.35 for excavation, and \$7.50 for concrete. Material was hauled by the 1,000 yards, and then dumped on land to be filled in. The tunnel portions were done by N. S. Shaler; the material being dumped into carts close to the shaft. The carts are hauled away without charge by the Boston & Maine Railroad.

Temperature to-day at 9, 12:30 and 5:20 o'clock, 52, 54 and 57 degrees respectively. Weather, generally fair.

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M A Y 4, 1901.

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Saturday in Boston, as mentioned above.

Temperature to-day at 9 and 12:50 o'clock, 52 and 64 degrees respectively. Weather, clear.

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M A Y 6, 1901.

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Walked down over Carr's work with Carr as far as Astor Place, and with Mc Donald from 14th to Grand Sts. Told Carr that I was disappointed in the estimate of Section 3, as I had been led to look for 20,000 yards, whereas only 15,000 yards were reported. Told him to measure the work on the 15th of the month and report the rate of progress made.

Temperature to-day at 9, 12:30 and 5 o'clock, 52, 60 and 56 degrees respectively. Weather, clear.

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M A Y 7, 1901.

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Met at 9 o'clock at 59th St. with Deyo, Rice, Craven, La Farge and Mc Nulty. Examined the enameled brick work in the roof of the station. Also arranged that Upham should put in a section of asphalt concrete under the surface of crossing frogs of the 8th Avenue Line.

In the afternoon took schoolboys over the upper work, and then met Value at 158th St. Had a talk with Mc Cabe and urged his running forward the concrete walls of the Open Cut work towards 155th St. as rapidly as possible, in order to keep the rock from falling down.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 60, 80 and 74 degrees respectively. Weather, clear.

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M A Y 8, 1901.

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Started with Klapp from 43d St.. Ran up over Craven's work and discussed with Klapp the beginning of Viaduct foundations at 129th St. Also told him that the stones as delivered seem to be good and would be accepted by me. Picked up Value and went back to 157th St., where I found concreting of the arch at 158th St. just beginning. Mc Donald came up, and when I told him that I was going over to Central Park to see about getting Farrell out as he (Mc Donald) wanted, he became quite excited and said that the Park Department had made no



M A Y 8 (Contd.)

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complaint, and until they made a complaint he did not think anything need be done. He then lost his temper over the idea of putting on the protecting guard of concrete over the waterproofing over the arch. Went to Central Park with Value and found the top dressing of gravel just being put on; discovered a leak on the west wall of the subway.

In the afternoon Deyo and Bryan called, and discussed with them the arrangement of the Third track on the Boulevard. Told them both that I would do whatever they wanted so far as track connections were concerned, as it made no difference to me one way or the other. I also told them about Mc Donald's outbreak of temper in the morning, Bryan stating that he had been rather moody of late.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 66, 70 and 64 degrees respectively. Weather, partly cloudy.

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M A Y 9, 1901.

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Rained all day.

Rapid Transit meeting in the afternoon.

Temperature to-day at 12:30 and 5:30 o'clock, 58 and 56 degrees respectively. Weather, raining.

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M A Y 10, 1901.

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Rained hard.

Conferred with Mr. Shepard in the afternoon in regard to the Halter Building. He said he thought that Halter was entitled to some sort of payment, and he said he would take it up with Taft and try and get an allowance from the Contractors.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 57, 58 and 54 degrees respectively. Weather, raining.

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M A Y 11, 1901.

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Routine work.

Called at Court, at request of John B. Mc Donald, to testify in the suit of Everett House Estate vs. Holbrook, Cabot & Daly. The principal question asked was as to whether the Rapid Transit Board had approved of the plan. After much discussion on the part of the lawyers, the question was admitted. Told them that the Board had approved verbally, but never by resolution.

Temperature to-day at 9 and 12:30 o'clock, 64 and 68 degrees respectively.

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M A Y 13, 1901.

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Had a talk with A. J. Halter over the telephone. I told him that we were ready to begin knocking down his vault wall, which we would do unless he would remove his property. He asked me to hold on another 24 hours so that he might confer with Counsel.

Went over all of Carr's Division in the afternoon. There did not seem to be as much progress on Section 2 as I expected to find.

Temperature to-day at 9, 12:30 and 5:10 o'clock, 54, 60 and 64 degrees respectively. Weather, generally fair.

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M A Y 14, 1901.

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Went over Craven's work beginning at 42d St. Craven told me that Bradley was not showing any progress at all. I told him not to say anything more to Bradley, but to measure up his work on the 15th, and again at the end of the month, and I would then take care of the matter direct with Mc Donald.

Ran over Value's work with Value south from 157th St. Found them backfilling the arch at 156th St., and one section of the arch at 158th St. completed as to concreting.

Temperature to-day at 9, 12:10 and 5:35 o'clock, 58, 66 and 64 degrees respectively. Weather, clear.

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M A Y 15, 1901.

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Routine work. Had a talk with Halter, who told me that, under advice of Counsel, he would not do anything until he was reimbursed, and would resist entering his property with force. Shepard told me to go ahead and take possession.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 64, 74 and 62 degrees respectively. Weather, generally fair.

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M A Y 16, 1901.

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Went over Carr's Division as far South as 14th St.

In the afternoon had a conference with Deyo in regard to the waterproofing of the Harlem River section. I suggested making an 8-inch wall of bricks and asphalt; this scheme was approved by Value.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 62, 74 and 72 degrees respectively. Weather, clear.

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M A Y 17, 1901.

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Took up Value at his office and examined, at his request, the plastering of the walls of the subway at 14th St. with Keene cement. Told Value to leave it up and see what effect time and moisture had. Then examined the trans-Harlem section which Value had looked at for the first time; then went to 157th St. and down over Value and Craven's work.

Temperature to-day at 9, 12:15 and 5:30 o'clock, 66, 70 and 64 degrees respectively. Weather, clear.

M A Y 18, 1901.

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Routine work.

Walked over Carr's work in the afternoon. Was not satisfied with the progress found on Section 2.

Temperature to-day at 9 and 1:30 o'clock, 58 and 58 degrees respectively. Weather, raining.

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M A Y 20, 1901.

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Routine work.

Left for Locust 10 o'clock boat.

Temperature to-day at 9, 12 and 5:30 o'clock, 54, 58 and 58 degrees respectively. Weather, generally fair.

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M A Y 21, 1901.

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Routine work in morning.

In the afternoon went over Craven and Value's Divisions with Charles D. Jameson.

Temperature to-day at 9, 12:30 and 4:30 o'clock, 66, 70 and 76 degrees respectively. Weather, clear.

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M A Y 22, 1901.

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Had Carr and Fisher meet me at the north end of Section 2. Walked down over Section 2. Complained to Fisher that the work was not progressing as I had been led to believe. He admitted that the upper block between Bond and Great Jones had been lagging, but due to a number of causes. He promised me that he would get the men at work and rush that block to completion. Between Bond and Bleecker the excavation was almost finished, there being a small amount of earth to take out under Bleecker Street. As soon as that was finished concreting would be continued through and arrangements made for a continuous uninterrupted erection of steel from Prince Street north to Bond. Between Bleecker and Bond Sts. there was nothing in the way to stop uninterrupted laying of concrete and erection of steel. Fisher promised me that this should go forward without delay. On Section 1 it is expected that concreting will begin this week in front of City Hall.

Carr's map of the Post Office showed that the Government property line extended some thirty feet north of the Post Office, and therefore the proposed loop would pass under Government property. Laid this matter before Shepard, and he told me to have a map prepared showing the property lines, and that he would have a proper application prepared.

Temperature to-day at 9, 12:30 and 5 o'clock, 66, 64 and 66 degrees respectively. Weather, clear.

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# STRIKERS BROKE FAITH.

## SUBWAY CONTRACTORS ISSUE A FORMAL STATEMENT.

**Declare That Their Employees Were Receiving the Highest Pay in the World for the Kind of Work They Were Doing—Trouble Brought About by Outside Causes.**

The committee representing the Central Federated Union and the Rapid Transit tunnel contractors which have been trying to bring about an agreement by which strikes will be averted in future on the subway held another meeting yesterday at the office of John B. McDonald the general contractor. The new demands which the C. F. U. indorsed at its uproarious meeting on Sunday and insisted should be a part of the proposed agreement were discussed. These are that the hoisting engineers receive \$2.50 a day and that the wages that are paid to the workers in the tunnel be paid by the members of the Rapid Transit Contractors' Association for the same hours of work on outside contracts they may have. William J. O'Brien, chairman of the C. F. U. committee, said after the meeting:

"We submitted the proposed amended agreement to the contractors. Their reply will be reported to the unions and it is for these unions to say what they will do."

The following statement was issued by General Contractor McDonald:

"Mr. McDonald, for himself and on behalf of all his sub-contractors, desires to make the following statement concerning the strike:

"Before the Court of Appeals declared the Labor law to be unconstitutional that law, of course, fixed the rate of wages to be paid to each class of laborers as the 'prevailing rate' paid to such class in the city of New York. This was interpreted by the labor organizations to mean the rate as fixed by them, and such was in effect accepted by the sub-contractors, and there was paid to every class of laborers who were organized into unions the rate fixed by such union. When the Labor law was held unconstitutional no change whatever was made in the wages paid, but the so-called 'prevailing rate' continues to be paid. It is my belief that the men employed in the construction of the Rapid Transit railroad are receiving the highest rate of wages paid for similar services anywhere in the world.

"From the inception of the enterprise, the sub-contractors and myself have done everything in our power to remove the possibility of any real grievance on the part of any of the men employed on the work, and when in December last a committee of the Central Federated Union was appointed to confer with the sub-contractors as to harmony of action during the progress of the work, to prevent friction and to settle all disputes between the employees and their employers, their overtures were welcomed by the contractor and the sub-contractors and a number of meetings were held at which different methods to accomplish the desired result were discussed, and the draft of an agreement finally prepared.

"About two weeks after the appointment of the committee of the Central Federated Union, one Bernard C. Kelly stated that the hoisters were complaining that they should receive \$2.25 a day instead of \$2, and that he was getting up a union of hoisters and that they intended to join the Central Federated Union. The contractors objected to new unions coming in and told the Central Federated Union committee that it would be very difficult to reach any satisfactory arrangement if new unions were to be formed and jump in whenever somebody thought he might make something out of it. The committee agreed to this and stated that the terms of the agreement under discussion should apply only to the Central Federated Union's existing when the committee was appointed. Some time in January, however, the new Metropolitan Hoisters' Union was admitted to the Central Federated Union and at once proved a disturbing element.

"Negotiations, however, were continued between the committee and the contractors and a contract had been substantially agreed upon which provided for arbitration of all questions which might arise during the progress of the work when without a word of previous demand or warning the walking delegates ordered the strike. This strike was brought about by some outside influence exerted with a view of forcing a settlement of differences which have no existence on the rapid transit work.

"The strike was a distinct breach of good faith, was recognized as such by the committee referred to, and is, I believe, condemned by all right thinking workmen. It is a walking delegates' strike. The agreement which the contractor and all the sub-contractors proposed to enter into to arbitrate any differences would, of course, make walking delegates unnecessary and would relieve the sober, intelligent workmen from their tyranny. The new demands for increased wages which have been made since the beginning of the strike are merely makeshifts, have no foundation in fairness and are not supported by the large majority of the men."

This was supplemented by the following statement from the sub-contractors' committee:

"The committee of the sub-contractors of the Rapid Transit railroad came here to-day to carry out the agreement formally submitted by the committee representing the Central Federated Union. This agreement was published in the papers this morning.

"The Central Federated committee, however, submitted additional requirements relating to outside work and also to an increase of wages for one class of labor.

"The representatives of the Central Federated Union stated that the contractors on outside work were paying the rate demanded and this committee stated that if they received proofs that such wages were being paid, we would even take that into consideration."

John J. Pallas of the Central Federated Union committee stated that the last paragraph of the above statement was in reply to statements by delegates that hoisting engineers received \$2.50 from some outside contractors. A general meeting of the sub-contractors will be held to-day.

M A Y 23, 1901.

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In the morning went over Value's and Craven's work. Told Value when building the Cut and Cover concrete arches to build a recess on the top of the wall so as to interlock the old and new concrete in order to reduce the leaks at the joint where the old and new concrete come together. Value told me that Mc Cabe was endeavoring to postpone the beginning of work between 135th and 145th Sts. until the 36-inch water main could be moved. This would involve considerable delay, as the new pipe would not be delivered until June 24.

Craven informed me that the hoisting men and drill runners had struck on Naughton's work and Degnon-Mc Lean's work, and he understood the strike would become general. At 41st St. explained to Craven what I had told Value about interlocking the arch concrete with the bench walls.

Rapid Transit meeting at 2 o'clock. Called up McDonald on the telephone to tell him about Mc Cabe. He told me he was then engaged in a meeting with the strikers, but would send Deyo to see me. Deyo called and said Mc Donald was very much disturbed about the strike. Deyo said he would go up to see Mc Cabe and get Mc Cabe to start without waiting.

In the afternoon called on Mr. Hewitt, as requested by Mr. Orr, to see about his chapter for the annual report

Temperature to-day at 9, 12 and 5:30, 76, 76 and 76 degrees respectively.

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M A Y 24, 1901.

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Met Carr at 42d Street and Fourth Avenue. Found the strike had become general. Went down both shafts at 41st St. Then went over Sections 3 and 2. On Section 3 found that Holbrook had got 8 machines at work and one drill. Urged him to stand firm and not give in. He promised to put up another concrete gang in front of Calvary Church. Degnon-McLean, through Fisher, asked for the lines of the Loop Station, City Hall Park, so that they could keep their teams at work on the shallow excavation. Called Bryan up on the telephone and he said that he had changed his opinion as to the necessity for that Station and wanted it laid out. So ordered Carr to lay it out.

Temperature to-day at 9, 12:30 and 5 o'clock, 76, 85 and 86 degrees respectively. Weather, clear.

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M A Y 25, 1901.

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Went to 59th St. Found Mc Donald talking with Mc Nulty. Mc Donald informed me that the Iron men went out that morning. Urged both Mc Donald and Mc Nulty to stand firm. I took Mc Donald over Craven's work and Value's as far as 110th St.

Temperature to-day at 9 and 12:50 o'clock, 52 and 54 degrees respectively. Weather, raining.

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M A Y 27, 1901.

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Walked down o\_ver Carr's Division. Found Holbrook's work practically suspended on account of rain, the only work going on being drillls at Union Square on Section 2 where men were at work; at Elm Street near Houston, and excavation going on at Grand, Duane and City Hall. Much hampered, however, by rain. Sections 5 and 6 practically suspended.

Had a conference with Belmont at his request in regard to the Station at 42d St. and Broadway, he asking me to see the Architects in regard to it.

Brackenridge, General Manager of the Brooklyn Rapid Transit Company, called. His talk was with respect to running Brooklyn Rapid Transit surface cars through the subway. After some talk he agreed with me that the best plan would be to run Elevated trains through and keep the surface cars out. He said that the Brooklyn people were talking a good deal about putting the surface cars on the Elevated structure, but he could not carry enough people by the single cars during the rush hours.

Henry Lewis Morris called in regard to the granting of an easement for an Elevated shaft at the corner of Mott Ave. and 149th St.

Burr called in regard to the possible changi\_ng of our route at 149th St. so as to avoid the new bridge.

Temperature to-day at 9, 12:40 and 5:30 o'clock, 56, 56 and 54 degrees respectively. Weather, raining.

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M A Y 28, 1901.

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Went down over Carr's Division. Found that work was developing, although most of the hoisting engines on Holbrook's work was being manned by higher-class men, Seaman for instance running one of the machines. Mc Donald's office reported, in reply to inquiry, that the strikers had offered to withdraw the most objectionable demand, namely, the tying up of the outside work that the same Contractor had so that the same rate and conditions should apply to both. The strikers thought that this compromise might effect a settlement. Mc Donald was purposely calling a meeting of the sub-contractors, believing that another 24 hours would bring the strikers to terms.

Called on Belmont. Discussed the plans for the building at 43d St. and Broadway. Told him that my advice would be to put stores on the ground floor instead of the cafe, and the cafe in the basement. Douglas Robinson was present and he urged the same view on Belmont. Belmont asked me to see Whitney Warren and tell Warren to prepare the plans accordingly.

Temperature to-day at 9, 12:30 and 5 o'clock, 66, 72 and 66 degrees respectively. Weather, cloudy.

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M A Y 29, 1901.

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Called on Warren. Saw Warren and Wetmore. Gave them Belmont's message. On account of rain, field work practically suspended.

Temperature to-day at 9, 12:30 and 5:20 o'clock, 56, 56 and 56 degrees respectively. Weather, raining.

M A Y 30, 1901.

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Spent the morning with Value at 158th St. Found that the rains had made the ground so heavy as to spring the horizontal bracing near 155th St. Ordered additional bracing put in, which Value reported in the afternoon over the telephone had been done.

Temperature to-day not taken (Holiday).

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M A Y 31, 1901.

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Walked down over Carr's Division. Found the work progressing, except that on Section 2 the Iron men had induced some of the new hands to leave. Fisher told me that they had got the police to put the strikers off.

Called up the Long Island Railroad to get statistics of travel of the Flatbush Avenue Station. Mr. Baldwin told me that their figures seemed to indicate that the average daily travel to and from the Long Island and Brooklyn terminals amounted to about 8,000,000, of which five million passengers were estimated to go to Long Island City and three millions to Flatbush.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 56, 62 and 60 degrees respectively. Weather, cloudy.

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J U N E 1, 1901.

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Hearing at the Mayor's office on the Brooklyn Extension.

In the afternoon went with Deyo to Fort George, where I met Value and Kinsley. Discussed the Fort George bill. Ordered Value to have a contour map prepared.

Temperature to-day at 9 and 12:30 o'clock, 62 and 70 degrees respectively. Weather, cloudy.

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J U N E 3, 1901.

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Walked down over Carr's Division. Met Carr at Bleecker Street; found work progressing slowly.

Had a call from Edw. W. De Knight, who used to be with the John's Company. He told me that he had left the Company, and wished to inform me that the asbestos being sent out by the John's people was being very heavily adulterated and was an unfit article to be used for waterproofing. This he said had worried him a great deal and he came to see me about it of his own free will.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 62, 72 and 68 degrees respectively. Weather, clear.

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J U N E 4, 1901.

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This morning went with Value to examine the washing out of the sand beneath the concrete at 132d St. by the excessive pumping. Approved his plan of cutting away the concrete that was undermined, and then replacing it with new concrete on a firm foundation, then grouting with cement of 1 to 1 under pressure behind the new concrete.

Asked Upham to call, and told him about the complaint of De Knight. He knew that the John's people had stopped using Bermudez asphalt, but was surprised to hear that they were otherwise adulterating their output. I asked him to have the best maker of paper felt call on me.

Burr called again in regard to 149th St. Bridge. He said that the Bridge approach could not be moved. I told him that we could move about 10 ft., provided the Bridge Department would suspend the construction of a portion of its wall. He suggested that I write the Bridge Commissioner direct.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 68, 84 and 80 degrees respectively. Weather, clear.

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J U N E 5, 1901.

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In the morning walked down over Carr's Division. Found work getting on fairly well on Section 3, and the same on Section 2 except so far as the Iron men were concerned, there

J U N E 5 (Contd.)

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being but one small gang of riveters employed.

At 2 o'clock, W. N. Mc Ilravy representing the National Coal Tar Company, and a representative of the Warren Chemical Company, called at Mr. Upham's suggestion with samples of tarred and asphalted paper. They told me that they had five tons of the asphalted paper on hand, and would make up as much more as needed- that it would weigh 12 lbs. per square ft. and would be furnished at the same price as asbestos paper. Then in the general talk that followed they said that they understood that the asbestos cloth was necessarily adulterated with sizing in the manufacture, and for that reason they had never taken it up. They argued in favor of tarred paper because the asphalt had to be thinned with petroleum oils in order to make it sufficiently fluid to permeate the felt. They believed that the tar was therefore a more suitable compound, especially if the material was to be buried in masonry or put under water. Notified Deyo by telephone that I should like to have the asbestos paper used instead, which he promised to take up with the Sicilian Co. at once.

Met Craven at 41st St. and went over his Division with him. Found the arch at 41st St. being laid with the horizontal joints in the arch, and a stretch of about 40 ft. being worked at one time. Told Craven not to work more than half that length, or only so much as could be done in two days, and to make the joints radial and not horizontal.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 75, 86 and 78 degrees respectively. Weather, clear.

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J U N E 6, 1901.

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Went over the work from 43d to 50th Sts. and found the Iron men had resumed work; then went through the Park with Value.

At 2 o'clock Mr. De Knight called with some samples of tarred and asphalted felt similar to those that were brought to the office yesterday. Without telling him of the visit of yesterday I asked him his opinion as to the merits of tar or asphalt. He said that he would prefer this tarred paped, and gave the same reasons exactly as the men did yesterday. He said that so far as the intermediate coating was concerned, he thought he would prefer asphalt. De Knight told me that, when exposed to moisture, asphalted felt mildews, but that tarred felt does not.

Went to the City Hall Park with Carr to lay out the beginning of the concreting in the Loop.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 78, 92 and 90 degrees respectively. Weather, clear.

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J U N E 7, 1901.

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With Carr and Rice examined Carr's work between Bond and Broome Sts., especially the crack in the masonry between Bleecker and Houston Sts. Directed Carr to make a careful survey.

Had a conference with La Farge and Gustavino in regard to

J U N E 7, (Contd.)

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the Station at City Hall Park. Directed Carr to waterproof that section of tunnel with the heavy tarred paper.

Duryea called, stating that he had been retained as Engineer by Mc Bean for the Harlem River Tunnel, and asked if Right of Way would be provided on the east side of the river for open dredging, and whether I would consider a change of plan from the two cast-iron tubes? In answer to the first, I stated that the Commission would provide a Right of Way for the structure, and no more- anything further required was a matter of negotiation by the Contractors. In regard to the second,- that I would consider any change of plan that might be presented. I told him if any change of plan were made, I should like to have the two tracks in one tunnel except between the pier-head lines.

Temperature to-day at 9 and 12:30 o'clock, 76 and 72 degrees respectively. Weather, clear.

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J U N E 8, 1901.

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Took Ridgeway over Craven's Division. Pointed out what I considered defective work in the arch at 41st St. in building it up with layers instead of radial joints.

Went over Value's work with him as far north as 157th St.

In the evening went to Shepard's house and discussed the question of the Brooklyn Extension. Shepard was of the opinion that we did not have to apply to the Secretary of War for per-

J U N E 8 (Contd.)

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mission to build <sup>a tunnel</sup> under the East River or Harlem River. After discussion, however, he came to the conclusion that we would have to.

Temperature to-day at 9 and 12:30 o'clock, 66 and 72 degrees respectively. Weather, clear.

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J U N E 10, 1901.

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Out of town (at Locust).

Temperature to-day at 9, 12 and 5 o'clock, 65, 70 and 80 degrees respectively. Weather, clear.

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J U N E 11, 1901.

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Routine work.

Called on Heins & La Farge in regard to the Station at 110th St.

Temperature to-day at 9, 12:30 and 5 o'clock, 72, 79 and 86 degrees respectively. Weather, clear.

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J U N E 12, 1901.

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Commencement Exercises at Columbia.

Met Craven at 3 o'clock at 59th St.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 76, 86 and 78 degrees respectively. Weather, clear.

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J U N E 13, 1901.

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Opening of construction in the Bronx to-day. Work began at Gerard Avenue and 149th St. Had a talk with Deyo and with Mc Bean about their work. They informed me that their sub-contract provided that they would have the right to dredge for the full width. I told Mr. Mc Donald that we would provide only the necessary Right of Way. He told me that that was all right, that they would probably the whole of Wilson & Adams' contract.

Temperature to-day at 9, 12:10 and 5:30 o'clock, 76, 80 and 89 degrees respectively. Weather, clear.

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J U N E 14, 1901.

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At Washington. Called on Secretary Gage and was by him referred to the Supervising Architect Mr. Taylor, who referred me to his Chief Assistant Mr. Wetmore. The Post Office matter was fully discussed between Mr. Taylor and Mr. Wetmore and they decided that no inconvenience would result from giving us temporary possession of these vaults. They decided, however, that all that <sup>the</sup> Secretary could give would be a revocable license, as had been done in other cases. This matter had apparently been gone over very carefully by the Supervising Architect, and he had made a list of decisions by the Attorney-General. We then returned to the Secretary's office, saw the Assistant Secretary of the Treasury, and was by him referred to the Solicitor of the Treasury. It was at last decided that application should be made in writing, said application to cover all the salient points, showing the advantage that the Government would get in the possibility o\_f having constructed a rail connection for the handling of mail cars, and that then the Secretary of the Treasury would give a revocable license which would allow us to continue operations until Congress had officially approved the same.

Called on Secretary Root who had a report from General Gillespie approving the East and Harlem River tunnels. The Secretary informed me that the papers would be made out at once and sent to Mr. Orr.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 66, 80 and 80 degrees respectively. Weather, cloudy.

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J U N E 15, 1901.

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Walked down over Carr's Division.

Routine work.

Temperature to-day at 9 and 12:30 o'clock, 60 and 65 degrees respectively. Weather, raining.

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J U N E 17, 1901.

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Schneider, Woefel and Elmore, representing the American Bridge Company, and Deyo called in regard to the Manhattan Valley Viaduct. The American Bridge people wanted to postpone the construction until next winter as they were rushed with work. After a long discussion, they stated that they could promise to supply Elevated Railroad material at the rate of 3,000 tons a month, beginning January 1st, which would mean that the whole of the material would be delivered on or before the following October.

In the afternoon Whitney Warren and Deyo called in regard to the two stations at 42d Street. Warren submitted plans showing very elaborate booths. I told him I doubted if the Commission would approve of the booths. The station at Broadway called for entrances to the sidewalk in front of the New York Hotel. I told him that this was something that the Astor Estate did not want to do, and that he would have to

J U N E 17 (Contd.)

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settle it himself.

Mr. Vanderbilt called in regard to the Fort George lands. He wanted to know what the construction would be like, and said that he was going up to-morrow morning to look the ground over with Douglas Robinson.

Simonds called and gave me the details of the asbestos analysis. He said that the analysis showed practically pure asbestos and the chemical constituents of a pure asphalt, the only foreign matter being a slight excess of water of an amount about 3 or 4 per cent., and a slight amount of Starch.

Fisher called on behalf of Degnon-McLean, and asked me to see Philbin, the District Attorney, to have the cases against the strikers who were attacking their men, energetically prosecuted. I told him I would do so, provided he would promise that they would keep at it. This he promised so far as he was concerned.

Temperature to-day at 9, 12:30 and 5:36 o'clock, 70, 74 and 94 degrees respectively. Weather, clear.

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J U N E 18, 1901.

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In the afternoon met Rives at City Hall Park and walked with him over the First Division. He seemed generally pleased with the results.

Temperature to-day at 9 and 12:30 o'clock, 74 and 74 degrees respectively. Weather, clear.

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J U N E 19, 1901.

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Met Rives at his house at 7:30, and rode him over Divisions 2 and 3, except Shaler's work. He expressed his entire approval of everything, except Bradley's work.

In the afternoon Mc Bean and Mc Mullen called with a modified plan for the Harlem River Tunnel. I told them that I would look into it and ascertain its suitability and let Mr. Deyo know.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 68, 78 and 78 degrees respectively. Weather, clear.

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J U N E 20, 1901.

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Had a session with Heins & La Farge, at which Bryan was present, in regard to the City Hall Loop Station, Heins & La Farge submitting estimate from Gustavino, who undertook to put in the arch at a cost of \$11,296; the arch at the crown to be only 5 inches thick. Bryan took lunch with me, and afterwards we had a general talk on the progress of the work.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 66, 73 and 78 ~~degrees~~ respectively. Weather, generally fair.

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J U N E 21, 1901.

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At 1:30 went with Deyo and Bryan accompanied by the officers of the Long Island Railroad to Jamaica to examine the track. Took up a rail and found that the concrete was in good condition all over. The track was slightly out of alignment and surface, due partly to the irregularity of the original getting out of the wooden blocks, and partly to the fact that the concrete had not been put in regularly, and wherever the same had been grouted the grouting had scaled off. The track had a decided vertical motion showing a wave in the rail. The track, however, rode well under passing trains.

Went over Craven's Division with Craven. Complained about Bradley's work. Bradley said that he was steadily increasing his force, and hoped he would do better.

Examined Shield's work with Value.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 74, 78 and 82 degrees respectively. Weather, clear.

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J U N E 22, 1901.

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Met Carr at 41st St. at 8:30. Went down the shafts at 41st St and 34th St., and then walked down over his Division.

Temperature to-day at 9 and 12 o'clock, 78 and 86 degrees respectively. Weather, clear.

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J U N E 24, 1901.

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Routine work. Aiken in town.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 84, 90 and 93 degrees respectively. Weather, clear.

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J U N E 25, 1901.

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Whitney Warren called. Told him to give me a plan as closely as he could of his building at 42d St. and Park Ave., so that we could prepare our plans. Also told him it would be impossible for us to lower the subway as he proposed, but we might be able to get the sidewalk raised.

Bryan called and told me about a talk with the Manhattan Railway.

Stilwell called. Had a general conversation..

At 10:30, under a subpoena, attended in District Attorney Schurman's office, and he said that the Grand Jury wished to investigate the construction of the subway on 4th Avenue, which



J U N E 25 (Contd.)

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in the opinion of certain jurors was maintained as a dangerous nuisance. Also present, General Douglas, Holbrook, and Mr. Robinson of the Metropolitan Street Railway Company. Examination adjourned until Friday.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 78, 78 and 80 degrees respectively. Weather, clear.

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J U N E 26, 1901.

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In the morning went over Craven's work on 42d Street. Found a small gang of men riveting the steel in front of Shayne's, and the steel being lowered in a pit between 5th and 6th Avenues. Met Degnon on the ground, who told me that he had great difficulty in keeping his steel riveters at work on 42d Street on account of Terry & Tench paying \$3.76 a day.

Met G. H. Clark at 28th Street and walked down over the First Division with him. Complained about the condition of the subway at Grand Street, as it was reeking with sewage.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 84, 89 and 86 degrees respectively. Weather, clear.

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J U N E 27, 1901.

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Examined the work at City Hall Loop. Found the concrete broken on top. Burns told me that it had been broken by the pulling of the wooden molds for the groove. Looked to me as if the concrete had been laid subsequent to the rest of the wall and not properly wet. Notified G. H. Clark.

Mr. Quinlan, representative of the Consolidated Telegraph & Electric Subway Company, called. He complained that Farrell was preventing them from laying their subway on 110th St. and 5th Avenue.

At 10:30 attended a hearing of the Grand Jury, accompanied by Holbrook, General Douglas and H. H. Vreeland. Explained to the Grand Jury the result of our experience with various kinds of fences. After the hearing Vreeland said that the Grand Jury had asked him to give a better exit from an entrance to the cars at 28th and 29th Sts., as the cars stopped before they reached the crossing, necessitating people getting out between the car and the fence. This Vreeland and Holbrook arranged to do.

Temperature to-day at 9, 12 and 5 o'clock, 80, 89 and 86 degrees respectively. Weather, clear.

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J U N E 28, 1901.

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Routine work.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 82, 90 and 86 degrees respectively. Weather, clear.

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J U N E 29, 1901.

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Met Upham and Craven at 59th Street to discuss the question of asphalt concrete. Generally agreed that it was not safe to trust the asphalt concrete as a waterproofing medium on account of the impossibility of examining the work.

Walked down Craven's Division as far as 42d Street. Found backfilling had just begun at 47th Street in front of Brewster's.

At 10:30 met Warren at Belmont's office in regard to the Station at 42d Street and Broadway. Belmont had a scheme to make the entrance to a possible cross-town 42d St. line through the hotel, which Warren did not want as taking up too much of the basement space. Suggested to Belmont that the proper entrance for the passengers was from the street. Elevators could be run from the Rapid Transit platforms and overhead bridge direct to platforms of the cross-town line below. That he approved of, but he said he also needed in addition a Baggage and Express delivery. Told him I would work up a plan and submit it. Suggested to them both the possibility of buying the Lincoln Safe Deposit Building and extending the hotel westerly.

Temperature to-day at 9 and 12:30 o'clock, 80 and 92 degrees respectively. Weather, clear.

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J U L Y 1, 1901.

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Conference with Carr and Craven in the afternoon in regard to the construction of the vaults for the Metropolitan Street Railway Company. Carr said that he thought that a light stone was necessary, as in the operation of these vaults the concrete was of softer material than stone and would become broken.

No record of temperature kept, due to absence of Priv. Secy. and Office Boy. Weather, however, equally if not warmer than previous day.

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J U L Y 2, 1901.

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Routine work.

Temperature to-day at 9, 12:30 and 3 o'clock, 90, 96 and 98 degrees respectively. Weather, clear.

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J U L Y 3, 1901.

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Routine work.

Temperature to-day at 9, 12 and 5 o'clock, 88, 94 and 82 degrees respectively. Weather, clear.

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J U L Y 4 (Holiday)

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J U L Y 5, 1901.

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Called on Henry Lewis Morris in regard to the grant of land at 149th St. and Mott Avenue. Explained to Mr. Morris that we would require at least 22 ft. in the clear, head room, and an entrance the full length of our property, namely, 33 ft., except as the latter might be occupied by the necessary supports for a building to be erected overhead. Mr. Morris told me to make the height 25 ft., allowing him to use any surplus that we did not need. Called on Mr. Shepard and explained this matter to him.

In the afternoon walked over Carr's Division from Grand St. north. Directed Carr to see that that portion of Section 2 in the neighborhood of Broome St. and Great Jones St. be pushed, and that the lower end of Section 3 be likewise hurried. These specific portions the Contractors made me a promise to hurry if I would allow them to close the whole of the street.

Temperature to-day at 9, 12:35 and 5 o'clock, 84, 89 and 76 degrees respectively. Weather, clear.

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J U L Y 6, 1901.

Went over all of Value's work south of 157th St., and Craven's work between 42d and 104th Sts. On Section 13 found things at a standstill south of 155th St. Bradley's work showed an improvement except that he was short of concrete men.

Temperature to-day at 9 and 12:30 o'clock, 78 and 78 degrees respectively/ Weather, clear.



SUNDAY, J U L Y 7, 1901.

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Went to Boston accompanied by Bryan, Deyo, Stillwell, Laty, St. John Clarke and Sperry of the Union Switch & Signal Company.

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J U L Y 8, 1901.

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Took a special train, accompanied by the Boston Elevated officials, over the whole of the Boston Elevated. In passing through the Subway all admitted that the air was in very good condition, and could not tell where the fans were being run. Later Deyo informed us that he had been informed that the fans were not being run that day at all.

In the afternoon Deyo, Clarke and I, with Carson and Division Engineer Palmer and Contractor Shaler, went through the East Boston Tunnel. Air pressure, 15 lbs. Clay was found to be hard and compact and non-water-bearing.

In the evening had a talk with Curtis of the New York & New Haven about a connection between the Rapid Transit Road and the Portchester Branch of the New Haven Road at some point near West Farms.

Shaler called and discussed with him the matter of a shield. He said that the drifts of the side walls were not expensive--in fact, he had contracted them at about \$5 a running foot per excavation, amounting to a trifle over 3 yds.

J U L Y 8 (Contd.)

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He did not think that a complete horse-shoe shield would work on account of the difficulty of getting an even bearing for it.

Temperature to-day at 9, 12:40 and 5 o'clock, 72, 76 and 76 degrees respectively. Weather, cloudy.

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J U L Y 9, 1901.

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All hands met in my room for a conference. It was finally agreed that the air in the subway was satisfactory enough, and that ~~although~~ it might be well to make possible provisions for fans in the future at either the sub-stations or at each individual manhole. On the Boulevard it was decided to put in three blowholes, one midway between the stations and two at either end of the stations.

In the afternoon, Deyo, Bryan, Clarke and I made a call on Carson. Talked to him about the possible examination for the ventilation of the subway, which Mr. Sargeant and Mr. Kimball of the Elevated said that we could do. Mr. Carson said that he had some experiments which could be found in the annual report, but would be glad to work with us for any further work.

Temperature to-day at 9, 12:36 and 5 o'clock, 76, 76 and 74 degrees respectively. Weather, clear.

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J U L Y 10, 1901.

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Ran over the work from 14th St. to 157th St. with Hunt.  
Rapid Transit meeting in the afternoon.

Mc Bean and Mc Mullen called in regard to the Harlem River Tunnel. I learned from Value this morning that they had a lump sum contract, and all savings therefore from the contract drawings would accrue to them. I told them that I had a contract for an iron-lined tunnel; that I was unwilling to have anything else than an iron-lined tunnel under the river, but that for approaches I would allow them to use a single-arch tunnel if they preferred. They then discussed the question of extra width for dredging purposes. I told them that I had nothing whatever to do with it and would do nothing about it, and would advise the Commission that no charge should be made against the work for Right-of-Way to be acquired for any such purposes.

Temperature to-day at 9, 12:50 and 5 o'clock, 76, 78 and 76 degrees respectively. Weather, cloudy and clear.

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J U L Y 11, 1901.

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At 11 o'clock had a meeting at Mr. Belmont's office with the Executive Committee of the Subway Construction Company, and of the Subway Realty Company. At the former meeting there was a general discussion on the Power Stations. Advised the Committee that, in my judgment, there was necessity for hurry. The meeting with the Realty Company was devoted to discussion of the 42d St. and Park Avenue Hotel plans and the possible

J U L Y 11 (Cnntd.)

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building of vaults beneath the roadway of 41st St. and Park Avenue. Told the Committee that I thought the Commission would use its good offices to obtain these vaults provided a reduction was made in the charge for the easement.

In the afternoon called on Shepard in regard to the Lenox Avenue Extension. He told me that he had given wrong advice in saying that the thing could be charged to Terminals, and was now satisfied that it would involve a change of route. Met Deyo and Bryan in the street and informed them verbally to this effect.

In the afternoon went over Carr's Division with him from Astor Place to 34th St. Told Carr that on account of the bad bottom at 31st St., if necessary we could permit the Contractor to open up for four tracks, provided he would hold the Metropolitan tracks secure so as to permit the street traffic to pass over.

Temperature to-day at 9, 12:10 and 5:30 o'clock, 74, 80 and 78 degrees respectively. Weather, clear and cloudy.

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J U L Y 12, 1901.

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Went over Carr's Division with him from Astor Place to Grand Street. Later at City Hall Park met Fisher on the work, who said that he was still having trouble with the Iron men, but he thought he was getting a force that would stay by him.

Had a meeting in Bryan's office. Present: Bryan, Deyo, Stillwell, Van Vleck, La Farge, Rice and Carr. General discussion on stations. Decided to adopt the La Farge plan;- to have two toilet rooms, one pay and one free, for men and women at each station, and that Clarke and Van Vleck were to agree upon some typical station plans to be submitted at a meeting next Wednesday. Afterwards a discussion was held about appointing a General Inspector of Duct Laying. I told them that, inasmuch as the ducts were being laid by them and they had to be made to accommodate their cavles, I thought the General Inspector should be their man and not mine; that if they would appoint such a man I would see that he was given ample opportunity to see that the work was done to his satisfaction.

Craven called and discussed the question of drainage pits.

Spent the evening with Mr. Oakman. Discussed with him the question of lack of progress on the work. I told him that the work was going irregularly, and showed him the diagrams.

He said that he would have a meeting with Mc Donald and Belmont and take the matter up. In regard to the Power Plant, he told me to go and see Belmont myself.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 70, 74 and 76 degrees respectively. Weather, cloudy and raining.

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J U L Y 13, 1901.

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Went over the work in City Hall Park, and on Elm Street between Pearl and Duane. In the former, some centres had been set up for the first time, and in the latter they were just setting the first pedestal stones for the iron.

Temperature to-day at 9 and 12:30 o'clock, 78 and 88 degrees respectively. Weather, generally fair.

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ADDENDUM, July 13.

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Called on Mr. Belmont and told him that the Equipment and Power plant were behind time, and it was necessary for him to arrive at some decision in regard to them. He explained to me the form of negotiations which he had on foot, which would lead him to adopt the Long Island City plant. I told him I did not believe in Long Island City- that the Power House was too far away, and that the tunnel would not be completed in time. He then asked me to see Bryan and take the matter up with him and arrange for a report to be made outlining a positive plan.

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J U L Y 15, 1901.

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Bryan called. Told him about my interview with Oakman and with Belmont, at which he expressed his gratification. He told me that Mc Donald was feeling quite out with the Company, and that he (Bryan) dreaded that there might be a break; that he himself did not believe in Long Island City as a site for the Power House, and that he would take the matter up at once with Douglas Robinson for other sites.

In the afternoon met Mr. Oakman at the Century Club and ran him over all the work from 42d St. to 157th St. He said that he appreciated what I had been telling him, and that he would do what he could to get the work advanced, but that he certainly would insist on a better condition of affairs in regard to Sections 6-A and 6-B. Told him about my interviews with Belmont and Bryan.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 78, 88 and 94 degrees respectively. Weather, generally fair.

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J U L Y 16, 1901.

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Met Carr at 41st St., but shafts were too smoky to go down.

Craven joined me, and went over all of Craven's work in detail. Found Bradley's work progressing, but in a very untidy and disorderly manner. Joined Carr at 31st St., where with Holbrook and Paschke soundings were made to get at the

J U L Y 16 (Contd.)

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nature of the soft ground which had been found there. This ground apparently consists of clay and other fine sand down to a depth of 30 ft. where coarser sand was encountered. Pumping has the effect of drawing out the fine sand. I suggested that we should increase the concrete 6 inches with pipe and sheet piling at the sides to prevent subsequent pumping for building foundations. In drawing out the fine material Paschke thought we had better make the extra concrete 12 instead of 6 inches.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 78, 84 and 82 degrees respectively. Weather, clear.

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J U L Y 17, 1901.

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Walked over Carr's Division from City Hall to Astor Place. At Duane Street found that the waterproof men had laid tarred felt instead of asphalted felt. Ordered the work stopped. Telephoned Carr, who said that it had not been done with his orders. Told him to see that the foreman was discharged, and for him to also see that all inspectors understood the difference between asphalted and tarred felt. Subsequently met the Superintendent of the Asphalt Company, who said that the trouble had arisen by the gang running short of asphalted felt and the foreman being too lazy to get some. Said he had trouble with the same foreman before.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 78, 83 and 78 degrees respectively. Weather, variable, finally raining.

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J U L Y 18, 1901.

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Messrs. Wolfel, Elmore and Lex of Pencoyd called in regard to a number of changes in the details of the Manhattan Valley Viaduct.

Burr called and stated that he had been appointed Consulting Engineer by Mc Mullen and Mc Bean on the Harlem River Tunnel, and wanted to discuss a flat-topped tunnel with a central wall of concrete. He had not been informed as to the previous negotiations on this question, nor that Duryea had been appointed Engineer and had subsequently resigned on account of Mc Mullen and Mc Bean's treatment of him. He suggested that I give him copies of all proposed sections and he would study the same.

Conference in Deyo's office in regard to stations.

Temperature to-day at 9, 12 :30 and 5:30 o'clock, 80, 86 and 84 degrees respectively. Weather, cloudy and clear.

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J U L Y 19, 1901.

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Routine work in the morning.

Spent the afternoon with Craven and Value on Craven's work. Found marked improvement on Sections 6-A and 6-B.

On Value's work went down the shaft at 104th St.;-Cages now running. Also went into the portal at Central Park; and the portal at 155th Street. Rock at Central Park fine. At

J U L Y 19 (Contd.)

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155th Street the heading was in dirt and rotten rock. Notified both Craven and Value about the laying of tarred felt and directed them to caution their inspectors.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 80, 86 and 78 degrees respectively. Weather, clear and cloudy.

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J U L Y 20, 1901.

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Reported that the bents at Pearl Street had fallen. St. John Clarke went down and made an examination, and I made one later. No damage done. Trouble arose from the men in trying to put an engine on top and pull the bents over.

Temperature to-day at 9 o'clock, 76 degrees. Weather, clear.

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J U L Y 22, 1901.

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Had lunch with Shepard. Discussed the question of condemnation maps. Told Shepard that I expected to be away during the month of October. He said that he hoped to do the same.

In the afternoon walked with Carr over his Division from the City Hall to 8th Street. Rode to 34th Street and went in the heading. Cautioned Carr against the painting over the dirt that accumulated on the iron work, and also to see that all loose paint was removed, and such places given one coat of red lead before the black paint was put on.

Temperature to-day at 9, 12 and 5:30 o'clock, 80, 86 and 88 degrees respectively. Weather, clear.



J U L Y 23, 1901.

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Bryan and Deyo called. Discussed with them a variety of subjects, as follows:

Harlem River Tunnel

They approved of the plans as prepared, and Deyo said that he could put his ducts in the bench walls of the concrete tunnel and at the sides of the tubular tunnel.

In regard to Mc Mullen and Mc Bean's contention that they were to be given extra width for dredging purposes, he said that his people were very much disturbed by this contract. Pointed out to him that all that he was to do would be to decline to accept the amended plans, which were very much cheaper, and to insist that Mc Bean build the iron tubes the full distance, as shown by the contract plans and so force a compromise.

Track

Showed them the suggested forms of track. They seemed to think they were both i\_mprovements over the concrete track, and that they proposed to try them both at Jamaica.

42d St. & Park Avenue

Explained to Deyo the amount of space required for the hotel vaults, and showed that the arched construction of the west side track was impossible. He said he would have his plans prepared for steel.

Car Sections

Discussed the size of cars at length, and urged

J U L Y 23 (Contd.)

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that they should use a somewhat wider car than was in use on the Manhattan Road.

Stephen W. Baldwin called at Luncheon. Discussed with him the question of deep girder rail in concrete. He said he thought that it would give very excellent results.

Heins called and discussed the Station details. He said to go ahead and finish up the bench walls of the City Hall Station as far as the spring, or about 4 ft. above the platform level, and to complete the arch as far as the end of the station, 30 ft. of which could be lined with glass tiles.

Saw Oakman and told him that the situation on Sections 6-A and 6-B was somewhat better, but that Mc Donald still needed prodding.

Aiken in town.

Temperature to-day at 9, 12:30 and 5 o'clock, 80, 86 and 88 degrees respectively. Weather, clear.

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J U L Y 24, 1901.

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Routine work.

Temperature to-day at 9 and 5 o'clock, 82 and 92 degrees respectively. Weather, clear.

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J U L Y 25, 1901.

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Deyo called i n the morning in regard to the extra width required for construction across the Pinkney and Wilson & Adams properties. Also discussed wi\_th him the matter of the retaining wall at i4th Street.

Rapid Transit meeting in the afternoon, devoted to the matter of condemnation of various properties. After the meeting notified Deyo overthe telephone that the Board had decided to admit such an extra width across the Pinkney and Wilson & Adams properties that the contractor might require for temporary construction purposes, the Contractor to pay for such additional width;- Deyo said that was in very good shape, and that Mr. McDonald would be pleased with the result.

Temperature to-day at 9, 12:30 and 5 o'clock, 75, 74 and 72 degrees respectively. Weather, clear.

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J U L Y 26, 1901.

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Examined the Loop at City Hall, and the work between Reade and Duane Sts.

In afternoon walked over Carr's Division from Houston St. to 41st St., going in all four headings of the Park Avenue Tunnel. The rock in the northeast heading seemed to me to be in poor shape, and I cautioned Carr to be careful, although I did not deem it necessary to enlarge to a timbered section. At 21st St. Carr requested permission, on behalf of Holbrook, to extend his cut on the west side of 4th Avenue, so that from the north side of 21st St. to about 20th St. travel would be restricted to the space occupied by the car tracks. This I declined to grant.

Temperature to-day at 9, 12:30 and 5 o'clock, 69, 69 and 68 degrees respectively. Weather, cloudy.

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J U L Y 27, 1901.

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Met Craven at 8:30, Manhattan Hotel. Went over his Division with him in detail.

Temperature to-day at 9 and 12:30 o'clock, 75 and 81 degrees respectively. Weather, clear.

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J U L Y 29, 1901.

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At 11 o'clock went before the Grand Jury to give testimony in regard to the Park Avenue Tunnel.

In the afternoon met Value at 110th St. and went over his work with him at all points south of 157th St. Also met Klapp at 129th St.

Temperature to-day at 9, 12:30 and 5 o'clock, 82, 90 and 73 degrees respectively. Weather, clear.

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J U L Y 30, 1901.

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Mc Donald called and stated that some friends of his were interested in the road projected from 177th St. to Portchester, and that the case was coming up before the Railroad Commission on Monday, and that his friends had been informed that the New Haven Road had requested me to appear in opposition. I told him that nothing of the kind had been done. He then asked me, in case the enterprise took shape, whether I would be willing to accept the position of Chief Engineer?

Carr called and submitted a promise from Holbrook in regard to 21st St., by which he asked that the cableway might be put up as originally requested, but that 21st St. would be left open for the present. This I consented to.

In the afternoon inspected Carr's work at City Hall, and at Reade and Duane Sts. - steel being lowered in the pit at Duane.

Temperature to-day at 9 o'clock, 78 degrees. Weather, clear.



J U L Y 31, 1901.

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General inspection of Carr's work and Craven's work, including 42d St. Party consisted of self, Rice, St. John Clarke, Carr, Craven, Value and Klapp. Everything satisfactory.

Temperature to-day at 9:30, 1 and 5 o'clock, 70, 82 and 80 degrees respectively. Weather, furious rain storm bet. 9 and 9:30, afterwards clear.

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A U G U S T 1, 1901.

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Had a conference with Bryan, who told me that property for a Power Site at 48th St. was being considered. Saw Belmont at 1:30. Discussed the question of Power Site with him, Wickersham and Charles Brown at length. Strongly advised against Long Island City. Approved 48th St., but preferred North River to 9th St.

Temperature to-day at 9, 12:30 and 5 o'clock, 72, 76 and 77 degrees respectively. Weather, clear.

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A U G U S T 2, 1901.

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At 11 o'clock attended a meeting of the Subway Company Directors. Long discussion about Terminal sites. Mc Donald

A U G U S T 2 (Contd.)

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avored Long Island City, provided an independent railway tunnel could be built. Baldwin favored Long Island City on the basis of a Pennsylvania Tunnel. General favored any basis. Oakman, Bryan and Vanderbilt in favor of Manhattan Island, and I so urged. Final vote taken threw out Long Island City, authorizing Belmont to secure either the 59th St. or 48th St. property. General opinion seemed to favor 59th St.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 72, 79 and 82 degrees respectively. Weather, clear.

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A U G U S T 3, 1901.

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Went over Craven's work; found things somewhat better.

Value joined me at 110th St. Took him as far as 157th St. and back on Lenox Avenue to 125th St.

Temperature to-day at 9:30 o'clock, 80 degrees. Weather, cloudy.

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A U G U S T 5, 1901.

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In morning under subpoena to attend the Railroad Commission in the matter of the Portchester Railroad.

At noon looked at Carr's work from 17th to 23d St.

Temperature to-day at 9, 1 and 5:30 o'clock, 76, 80 and 78 degrees respectively. Weather, generally fair.

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A U G U S T 6, 1901.

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Mr. Orr came to town and sent for me. Met him in his office. Told him the work was proceeding satisfactorily. Explained to him about my vacation.

James L. Wells called in the afternoon, he having been sent for by Commissioner Rives to estimate the value of the easements at 42d St. and Broadway, and Park Avenue.

Temperature to-day at 9, 1 and 5 o'clock, 72, 74 and 70 degrees respectively. Weather, raining.

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AUGUST 7, 1901.

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In A.M. met Carr at Astor Place and examined the cracked roof arches at 10th St. and 21st St., which Carr believes was done through resting the jacks on the centres of the arches or jacking up the street track. The cracks were small, and in all cases but one showed no signs of leak. This one case of leak at 10th St. probably due to water running in from the end beneath the water tube. Instructed Carr to rewaterproof this arch so as to be sure to smooth over the cracks, and watch developments. Looked up seriously with him the condition of Lafayette Place, and told him to see that this work was pushed and Lafayette Place vacated.

Temperature to-day at 9, 1 and 5 o'clock, 76, 82 and 78 degrees respectively. Weather, generally fair, raining in morning.

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AUGUST 8, 1901.

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Went over Craven's work from 42d St. to 59th St. On 42d St. found condition of things bad, two house connections running into the trench, 48-inch main looking badly, and everything covered with mud. Instructed Craven to have a watchman carefully watch the waterproofing and to have the leaking pipes and sewers stopped.

Baldwin, Jacobs and Davies called in regard to a connection at 33d St. between the Long Island Tunnel and the Rapid Transit Subway. Showed Jacobs and Davies the amended plans for 33d St. Station, and urged the use of the Escalator instead of

A U G U S T 8 (Contd.)

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Elevators.

Carr informed me over the telephone that work on Lafayette Place was improving, as the waterproofers and concreters were at work on one section which was nearly finished.

Temperature to-day at 9, 1 and 5 o'clock, 72, 86 and 82 degrees respectively. Weather, clear.

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A U G U S T 9, 1901.

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In afternoon met Craven at 59th St. Went over the upper part of his Division with him, and then with Value over all points south of 168th St.

Temperature to-day at 9, 1 and 5 o'clock, 72, 82 and 76 degrees respectively. Weather, clear.

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A U G U S T 10, 1901.

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Routine work in office.

Temperature to-day at 9 and 1:30 o'clock, 76 and 88 degrees respectively. Weather, clear.

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A U G U S T 12, 1901.

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Heavy rain all day. Routine work in office, except for short inspection of the City Hall Loop and the work between Chambers St. and Pearl.

Temperature to-day at 9, 1:10 and 5 o'clock, 72, 76 and 72 degrees respectively. Weather, raining.

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A U G U S T 13, 1901.

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General Inspection Divisions 2, 3 and 4, by all Division St. J.C. Engineers, Rice, and self. On the inspection had a general conference in regard to the backfilling over the arch near 158th St. It was finally decided, where the rock was blown out for a considerable distance, to build a bridge at 10-ft. centres and 2 ft. wide back from the arch to the rock, bringing the same well up on the haunch of the arch, and between these ribs to put in dry packing.

In the afternoon Shaler called in regard to the lining of the Park Avenue Tunnel, stating that he expected to begin this work about November 1st.

Temperature to-day at 9, 1 and 5 o'clock, 76, 82 and 78 degrees respectively. Weather, clear.

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A U G U S T 14, 1901.

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Aiken in town. Had a long talk with him about matters of inspection and painting. Instructed him to have samples of paint prepared so as to ascertain, by experiment, the proper proportions.

Carr called in the afternoon and told me that Degnon-McLean had been laying stones so as to prevent a proper lapping of the waterproofing, in spite of the Inspectors' admonitions to the contrary. Told Carr to have all such stones taken up and relaid after the waterproofing was in place.

Temperature to-day at 9, 1 and 5 o'clock, 72, 78 and 74 degrees respectively. Weather, cloudy.

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A U G U S T 15, 1901.

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In afternoon took George S. Morison over all the work north of 14th Street. He expressed his satisfaction both with the quality of the work and its method of execution.

Temperature to-day at 9, 1 and 6 o'clock, 76, 78 and 72 degrees respectively. Weather, clear.

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A U G U S T 16, 1901.

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This morning walked with Carr over his Division north from Houston Street. Found the damage done by the bursting of the water pipe at Great Jones Street not serious. Carr asked that permission be given Holbrook to open for four tracks south of 26th Street; declined to do it unless Holbrook promised to clean up his work and rush his steel erection.

Examined the two headings at 41st Street. Told Carr that the west heading he might reduce to the normal section, but in the east heading to keep out to the 2-ft. section until the rock became stronger.

Holbrook called in the afternoon. I explained to him my criticism of his work, being short in the steel erection, and the work untidy. He promised that if I would allow him to open for four tracks south from 26th St. he would greatly increase his steel gang, and promised that he would soon begin to

A U G. 16 (Contd.)

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get his work closed up, but that he was seriously inconvenienced during the past month owing to the impossibility of waterproofing during the wet weather.

O'Connor called and told me that the Highway Department had taken up the question of the repaving of Elm St., Lenox Avenue and upper Broadway, and that I would hear from him shortly.

Temperature to-day at 9, 1 and 5 o'clock, 76, 84 and 78 degrees respectively. Weather, clear.

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A U G U S T 17, 1901.

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Absent in Washington (Secy. Hay--A.C.D.)

Temperature to-day at 9 and 12 o'clock, 80 and 84 degrees respectively. Weather, clear.

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MONDAY, AUGUST 19, 1901.

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Routine work all day. In the afternoon examined the work at City Hall and north from there as far as Pearl Street.

Mr. Eugene Cohn, 97 Nassau St., called stating that he had been retained by the property owners between 14th and 17th St. to bring suit for damage. He wanted to know by what authority the Metropolitan Street Railroad Company had moved its tracks.

A U G. 19 (Contd.)

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I told him that the authority was my own permission, that no special permit of the Board was given, but acting under the general authority of the Rapid Transit Act.

Temperature to-day at 9, 1 and 5 o'clock, 74, 76 and 68 degrees respectively. Weather, raining.

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TUESDAY, AUGUST 20, 1901.

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Agreed over the telephone with Deyo to make the foundations for the Westchester Avenue Viaduct of the same general dimensions as the Manhattan Valley Viaduct.

Temperature to-day at 9, 1 and 5 o'clock, 74, 84 and 82 degrees respectively. Weather, cloudy and clear.

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WEDNESDAY, AUGUST 21, 1901.

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Examined Carr's work from Grand to 33d St. Met Fisher at Broome St., and he promised that he would have this work ready for completion.

Met Holbrook at Lafayette Place. Told him that a strike suit was threatened for Union Square, and that it was advisable to begin putting in the structure as soon as possible. He told me he hoped to get laying concrete before the end of the month. Told Holbrook that there was a very decided im-



provement in regard to his work.

In the afternoon Carr reported that cheating in the concrete had been discovered at the City Hall; that it had been reported to him some time since that the men were cheating there, and in order to catch them he had sent a man from his office to mingle with the crowd while the Inspector was withdrawn. He discovered that the men were unloading only half of a bag of cement at a time. Went to City Hall with Carr and Burns and saw 16 half-filled bags; ordered the foreman discharged and the concrete torn out.

Temperature to-day at 9, 1 and 5 o'clock, 78, 82 and 76 degrees respectively. Weather, clear and cloudy.

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THURSDAY, AUGUST 22, 1901.

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Wrote Mr. Mc Donald about the concrete. Fisher and Carr called; the former to plead for Morris as not being responsible, that the cheating had been done by a drunken workman. Told Fisher I would not recall the letter, but would change the order for Morris' discharge if he could show me that I was wrong. Subsequently learned through Carr that Morris himself had been on the platform when the cheating was done.

In the afternoon went over Craven's work and Klapp and Value's work as far as 140th St.

Temperature to-day at 9, 1 and 5 o'clock, 80, 84 and 88 degrees respectively. Weather, cloudy and clear.

FRIDAY, AUGUST 23, 1901.

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Routine work.

Temperature to-day at 9, 12 and 5 o'clock, 80, 86 and 84 degrees respectively. Weather, clear.

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SATURDAY, AUGUST 24, 1901.

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Routine work.

Temperature to-day at 9 and 12 o'clock, 80 and 78 degrees respectively. Weather, raining.

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MONDAY, AUGUST 26, 1901.

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Deyo called. Told me that he had been West with Bryan and Van Vleck examining the Ellis Works. Discussed with him a number of subjects, among other things the spacing of the holding-down bolts of the Elevated Railroad lines. He told me that he would have the holes in the stones re-drilled with the proper spacing.

In the afternoon went over Carr's work from Lafayette Place south from Houston Street. Discussed with Carr the irregularity of alignment caused by the variations in the length of the roof beams of the Bleecker Street Station. Instructed him to have the one roof beam that was  $5/8$  of an inch long cut off, holes plugged and redrilled. Discussed with him the possibility of other cheating in concrete. He told me that he had been informed that the custom was general along

the line, but he said that he would put on more inspectors and instruct all hands to be on guard.

Temperature to-day at 9, 1:30 and 5 o'clock, 72, 80 and 78 degrees respectively. Weather, clear.

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TUESDAY, AUGUST 27, 1901.

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At 10:30 saw the vault light of the Tucker & Winton Co. tested in the structure at Union Square. Stones were piled on the centre of the vault light on a cast-iron plate 8 inches in diameter. At the end of the four stones slight cracks became visible, and at the end of the 13th stone the vault light failed completely.

Temperature to-day at 9, 1 and 5 o'clock, 78, 82 and 76 degrees respectively. Weather, clear.

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WEDNESDAY, AUG. 28, 1901.

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Deyo called with Wolfert in regard to getting permission for the Elevated Railroad sections. Complained to Wolfert about the irregularity of delivery and the fact that Keystone were sending forward material not inspected; Wolfert promised to have it corrected. Deyo said that he would order Mc Cabe to sink test pits at Fort George as directed by Value.

Took luncheon with Bryan. Discussed the question of engines. Urged Bryan to accept the Allis-Chalmers bid as being a concern on whom pressure could be brought through Read and Vanderbilt.

Examined vault light after yesterday's test, and Carr's work from 10th St. to 22d St.

Temperature to-day at 9, 1 and 5 o'clock, 76, 82 and 78 degrees respectively. Weather, clear.

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~~A U G. 20 (Contd.)~~

~~the line, but he said that he would put on more inspectors and instruct all hands to be on guard.~~

~~Temperature to-day at 9, 1:30 and 5 o'clock, 72, 80 and 78 degrees respectively. Weather, clear.~~

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THURSDAY, AUGUST 29, 1901.

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Mr. Wanamaker called and told me that he desired the Commission to condemn the northwest corner of Astor Place and 4th Avenue (2 lots), and that he would purchase the unused portions from the Commission afterwards. I told him that the matter of the street opening was now in the hands of the Board of Public Improvements. He said that if the authorities thought that the street was the proper thing, he would not oppose it, but thought if the street did not go through that he was prepared to discuss the question of the purchase of the land by the Commission for the Right of Way.

Tested the Tucker and Vinton vault lights by impact tests. Two footing stones were dropped on the unbroken sections. The first stone failed to strike square but landed directly over one of the cross I-beams; it broke a hole through the concrete. Between the break, the wires bounced from the I-beam over to the south section of the vault light, a distance of about 5 feet, and bounced from there to the ground without damaging the vault light except to crack two glasses. The second



stones dropped square on the south vault light, landing on the corner of the stone directly in the centre of the vault light- it went through. The failure, however, was due principally to the fact that the wires were not fastened to the edges, and that the edges of the vault light pulled forward. Mr. Tucker informed me that they had never been in the habit of fastening the wires. I told him that in case his vault lights were used on our work, the wires on the edge of the vault light must be hooked over the flanges of the beams.

In company with Rice examined Carr's work from 14th St. to 41st St., including the northeast heading. Directed Carr to drop the section to the 18-inch section, as in my judgment the rock was strong enough; in this opinion Rice concurred. Directed Holbrook to start an iron gang at work at 11th St. and 4th Avenue. With Rice and Craven went over Craven's work on 42d St. Met Mr. Conger, of Lewis & Conger, in front of his building; told him that the manhole would not be placed in front of his building- that the sewer trench would be built with concrete, all sheeting to be drawn, but that the sheeting behind the Subway itself had best be left in places.

Temperature to-day at 9, 12 and 5 o'clock, 74, 82 and 78 degrees respectively. Weather, clear.

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FRIDAY, AUGUST 30, 1901.

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This morning examined the work at City Hall Park. Found it going very slowly.

Went over Craven's work with him in detail from 43d St. north. Found the iron strike over on Bradley's work and the iron men going back. Directed Craven to have the platforms of the 59th St. Station tried so that we could determine as to whether there were any leaks or not.

Went over all of Value's work, including the shaft at 104th St. and 81st St.; in both of the tunnels found rock in excellent condition. On Lenox Avenue directed Value to have the finished portions cleaned up and leveled off so that they could be restored to traffic.

Temperature to-day at 9, 12 and 5 o'clock, 74, 80 and 78 degrees respectively. Weather, clear.

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SATURDAY, AUGUST 31, 1901.

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Absent at Locust Point.

Temperature to-day at 9 and 12:30 o'clock, 78 and 84 degrees respectively. Weather, clear.

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MONDAY, SEPTEMBER 2, 1901.

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Holiday (Labor Day).

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TUESDAY, SEPTEMBER 3, 1901.

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Hough called in the afternoon at my request to discuss the matter of a General Inspector. He told me in some work that they had been doing on the New East River Bridge that one of his foremen had been caught putting in a bag and a half of cement instead of two bags for a batch of concrete- that when he had been discharged he told Hough that Degnon-McLean's foreman told him that Degnon-McLean had not put in a single full portion of cement in any batch of concrete that they had mized for their part of the foundation work.

Temperature to-day at 9, 1 and 5 o'clock, 72, 80 and 78 degrees respectively. Weather, clear and cloudy.

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WEDNESDAY, SEPTEMBER 4, 1901.

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J. V. Davies called and discussed the question of the Long Island Terminals. I suggested that we should build a loop in connection with either side for the Long Island tracks, and a platform on the outside of the loop under the Long Island Railroad Station connecting with the Long Island Railroad platform. This he thought was the best possible arrangement to make.

Roberts called and wanted to know whether the foundation stones for the Kingsbridge Extension should be drilled with the holes 2'-2" centre or 1'-2" centre; I told him 1'-10".

Professor Burr called on behalf of McMullen and McBean and stated that the test pits showed that the concrete surrounding the Lenox Avenue Electric Subway projected so far to the westward as to interfere with the driving of the sheet piles, and suggested that we should move our work further to the westward. Told him I would investigate and report.

Temperature to-day at 9, 1 and 5 o'clock, 74, 82 and 80 degrees respectively. Weather, clear.

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THURSDAY, SEPTEMBER 5, 1901.

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Mr. Kingsley of Boardman's office called to go over the work. Took him with Carr over Carr's Division from City Hall to 17th St. Found the centres at City Hall just being taken down; concrete in the roof looked very good, but the walls at places were somewhat rough and showed one or two leaks. Told Carr to cut them out when the leaks occurred and have them stopped. Told Carr what I had heard about Degnon-McLean cheating in the concrete on the East River Bridge.

Called on Wickersham, who told me that he had found, to his disgust, that work had not been pushed in front of the Marsh property on Elm Street; apparently Marsh and Degnon had some sort of a political deal on hand. Wanted me to sign some affidavits in regard to the method of doing the work, which I did.

Temperature to-day at 9, 12:30 and 5 o'clock, 74, 82 and 84 degrees respectively. Weather, cloudy.

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FRIDAY, SEPTEMBER 6, 1901.

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With Value and Klapp went over their work from 110th St. and Lenox Avenue, including the portal, to the Bronx. Found Klapp's concrete on Westchester Avenue looking exceedingly well.

Had Craven meet me at 102d St. and went down over his work with him. Found two gangs of steel men at work on Section 6-B. Found Bradley, and he told me that he expected to have steel men at work on Section 6-A on Monday. Complained to Bradley about his failure to turn out the requisite amount of excavation; also directed him to increase his concrete force.

Temperature to-day at 9, 12:30 and 5 o'clock, 72, 80 and 75 degrees respectively. Weather, cloudy.

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SATURDAY, SEPTEMBER 7, 1901.

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Mr. Stover called asking me to save the trees on the Boulevard from 71st to 81st Sts., and from 102d to 112th Sts., that the same might be moved to a suitable park. Told him I would look out for them.

Discussed with Carr a number of matters on his Division.

Temperature to-day at 9 and 12:30 o'clock, 78 and 82 degrees respectively. Weather, cloudy.

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MONDAY, SEPTEMBER 9, 1901.

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At meeting of the Board I recommended increase of St. John Clarke's salary to \$4,000, the same rate as the Division Engineers, which was passed.

The Board gave me leave of absence to go abroad, and my expenses paid, that I might r\_e\_p\_o\_r\_t to the Board on the latest conditions of operating underground railways.

Mr. Starin informed the Board in my absence--I having been requested to withdraw--that he had been told by some one connected with the Contractors that, in every case where difference of opinion had arisen between the Contractor and myself, it afterwards turned out that the position that I took was the correct one.

Temperature to-day at 9, 12:30 and 5 o'clock, 60, 80 and 78 degrees respectively. Weather, cloudy.

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TUESDAY, SEPT. 10, 1901.

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With Clarke called on La Farge. Discussed with him the matter of the 28th St. Station. He said that he had come to the conclusion that light-colored brick would not answer, as they could be easily marked with lead pencil. He therefore suggested making a lower base of darker brick and using the dark tile above the wainscot line. He suggested that I authorize him to have this done, namely, build a small section of the wall at 59th Street, and then for him to finish his plans so that a decision could be reached before I went away.

Called on Mr. Belmont to tell him that I was not going on the same ship with him.

In the afternoon took Mr. John C. Ferguson over the work from 42d to 120th St. Found things progressing fairly well.

Temperature to-day at 9, 12:20 and 4:40 o'clock, 72, 72 and 70 degrees respectively. Weather, cloudy.

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WEDNESDAY, SEPT. 11, 1901.

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Met Carr at 34th St. and went over his Division very critically down as far as Pearl Street. Directed him to build two 30-inch cross sewer pipes at 31st St. instead of 20-inch as now laid out, in order to give greater head room. Directed him to have the 2-track work on Lafayette Place rushed forward so that traffic could be facilitated in the street.

Temperature to-day at 8:40, 12:40 and 5 o'clock, 70, 76 and 79 degrees respectively. Weather, cloudy.

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THURSDAY, SEPT. 12, 1901.

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Wolfel and Deyo called in the morning about rivets which I had condemned, Wolfel stating that a new rivet head had been adopted, but that he would send over a rivet expert to look into the matter.

In the afternoon with Carr and Fisher examined the condemned concrete at City Hall Park, at request of Fisher, Fisher maintaining that the concrete which had been ordered out was as good as that was being left in. Two men were put to work with picks, but the result merely indicated that the condemned concrete was much more easily broken. Fisher asked me to restore Morris, he (Fisher) believing that Morris was absolutely innocent of any wrongdoing. Told Fisher that I would see him about it later and would present to him the evidence of having caught Morris in the act.

Temperature to-day at 9, 12:20 and 5 o'clock, 76, 80 and 78 degrees respectively. Weather, generally fair.

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FRIDAY, SEPT. 13, 1901.

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With Mayor Hart of Boston, Mayor Dickinson of Cambridge, Wm. Jackson, City Engineer of Boston, and Rice made an inspection of the work from Bleecker Street to 181st Street. The two Mayors and Jackson seemed very much pleased with our progress.

Temperature to-day at 9, 12:20 and 5:10 o'clock, 72, 78 and 78 degrees respectively. Weather, clear.

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SATURDAY, SEPT. 14, 1901.

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Looked over Carr's work around City Hall and Pearl St.

Temperature to-day at 9 and 1:20 o'clock, 74 and 82 degrees respectively. Weather, clear.

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MONDAY, SEPT. 16, 1901.

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Bryan called for a general talk, and said among other things that he was anxious to get the road completed so that they could begin operating as far as 145th St., and that at that end they were going to call for the engines to be delivered one by one. Also he gave me to understand that there was a good deal of friction developing in the office over Mc Donald.

Mr. Fox, the Rivet man of Pencoyd, called. He said that so many of the condemned rivets were culls that the men were generally using too short a rivet; he would recommend a longer rivet being used. He was, however, going to make further investigation.

Mr. Starrett and Mr. Reed of the Metropolitan Traction Co. and Mr. Deyo called at 3 and had a long discussion in regard to supporting the Metropolitan tracks. The Metropolitan people said they did not care what method we employed, whether light masonry or arch, as long as they got a good line and surface and a grade that would be accepted by the Highway Department.

Temperature to-day at 9, 12:40 and 5 o'clock, 74, 80 and 76 degrees respectively. Weather, clear.

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TUESDAY, SEPT. 17, 1901.

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Mr. J. Allan Baker, of the London County Council, Mr. Alfred Baker, General Manager of the London County Council Tramways, and Mr. Ryder, Electrical Engineer of London County Council, called. They stated they had been in this country about a month looking into the matter of building a subway for the railway and pipes in the busy streets of London, such as the Strand. They had been in Boston and elsewhere and had learned of our work, having been introduced to Carr by Mr. Starrett, Carr having sent them to me. I took them down to and Park Row, <sup>and</sup> showed them the work under Park Row, with which they were very much impressed, and were astonished to learn that we proposed to build the shallow construction down Broadway from the Post Office.

Carr called with Burns and Farrell, the latter being the man who had detected the cement cheating at the City Hall. Farrell stated that Morris was present when the bags were half empty, and when charged with it at first denied knowing anything about it, and then turned around and asked Farrell why the latter had not "put him on."

Temperature to-day at 9, 12 and 4:40 o'clock, 76, 80 and 64 degrees respectively. Weather, raining and cloudy

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WEDNESDAY, SEPT. 18, 1901.

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Absent, St. Mark's School.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 66, 62 and 60 degrees respectively. Weather, cloudy and raining.

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THURSDAY, SEPT. 19, 1901.

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Holiday (Mc Kinley Funeral)

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FRIDAY, SEPT. 20, 1901.

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Called on Mr. Orr and discussed with him the 149th St. Bridge and 149th St. and Westchester Avenue cut-off and Lenox Avenue Extension.

Called on Shepard and discussed general line of hearing before the Commissioners. Told Shepard that this time I wanted a very much freer hand and did not want to be compelled to disclose in detail details of plans and estimates. Had a discussion with him in regard to the vault walls. He told me to write the Contractor a letter directing him to proceed to water-proof the vault walls; if the Contractor did not do so that I need not take any further steps to compel him.

Mr. Dominico, General Inspector of the Argentine Railways, and Mr. Carl Ridlich, Engineer of Vienna, called having inspected our work.

FRIDAY, SEPT. 20 (Contd.)

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Otto Horwitz of Samuels & Horwitz, and Mr. Bondy called at my request and discussed the offer of an easement across the Fort George property.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 56, 60 and 58 degrees respectively. Weather, cloudy.

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SATURDAY, SEPT. 21, 1901.

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In the morning went over Craven's work south from 60th St., and with Craven along 42d Street. He told me that but one gang was working on 42d St., but that steel was now coming forward, and that nothing should prevent the second gang being put on the cross drifts under the street.

Met Carr at 33d St. and went with him over his Division as far as 18th St. investigating the irregularities of the track. Carr told me that when the surface track was put up a good average profile was adopted in conference with the Highway Department, and that the Railway Company would not object to any other profile provided the same was regular. He said that, even with their best work, there had been some slight settlement. I told him to set all his track high, taking special pains to set it high at those places where the original grade had been rather low, and that when the work was completed we would get the Highway Department to approve the profile as constructed.

Temperature to-day at 9 and 12:40 o'clock, 56 and 64 degrees respectively. Weather, clear.

MONDAY, SEPT. 23, 1901.

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At 10 o'clock met Mr. Orr at his office and took him in the automobile over all the work up to 157th St. on the west side, and half way to Westchester Avenue on t~~he~~ East, meeting Carr, Craven, Value, Klapp and Hendrick on the work.

In the afternoon Mr. Quin called representing the Van Schaick property at Fort George. He asked to have a map prepared and asked me to procure a valuation of what we required.

Temperature to-day at 9, 12:30 and 5 o'clock, 64, 68 and 72 degrees respectively. Weather, clear.

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TUESDAY, SEPT. 24, 1901.

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Klapp and Value called as requested, and I discussed with them the question of making changes in their Divisions. Both seemed very much pleased. Instructed Value to furnish Klapp all facilities for getting details of the East-side work.

Temperature to-day at 9, 12:40 and 5 o'clock, 64, 74 and 83 degrees respectively. Weather, clear.

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WEDNESDAY, SEPT. 25, 1901.

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At my request Mr. Degnon called and I told him that, in my judgment, 42d Street was the most critical section on the whole work. He said that he would increase his force as soon as he knew that the steel was going up; up to date he had been delayed by the non-delivery of the steel. I showed him that the steel was now coming forward, and at his request I wired in regard to certain bulb-angle columns, receiving an answer that they would be shipped on Monday next, October the 30th. Degnon promised to put on a night force beginning Monday on 42d St. and employ a night force wherever the same could be used.

Mr. Roe, of Evans, Choate & Beaman, called in regard to the Astor Easement at 42d Street and Broadway. He said that the Architects told him that the whole cellar space was necessary, and that we ought to excavate beneath our railway for the space beneath to allow them to use it. I told him that this would involve great expense, and I thought it a great deal better to leave our railway on a —————, as it were, and to excavate additional cellar space outside of the Rapid Transit lines.

Temperature to-day at 9, 1 and 5:05 o'clock, 64, 60 and 62 degrees respectively. Weather, clear.

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THURSDAY, SEPT. 26, 1901.

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At Yacht Race.

Temperature to-day at 9, 12:25 and 4:45 o'clock, 56, 62 and 66 degrees respectively. Weather, clear.



FRIDAY, SEPT. 27, 1901.

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Mr. Allan Baker of London called and showed him the work at the City Hall Park.

Rapid Transit meeting in the afternoon.

Temperature to-day at 9, 12:30 and 6 o'clock, 66, 68 and 64 degrees respectively. Weather, clear.

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SATURDAY, SEPT. 28, 1901.

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At Yacht Race.

Temperature to-day at 9 and 12:30 o'clock, 66 and 78 degrees respectively. Weather, clear.

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MONDAY, SEPT. 30, 1901.

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Meeting of the Supreme Court Commission in the afternoon.

Temperature to-day at 9, 12:30 and 6:15 o'clock, 72, 76 and 68 degrees respectively. Weather, clear.

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TUESDAY, OCT. 1, 1901.

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Examined the work on 42d Street, and walked with Carr down over his work as far as Pearl Street

In the afternoon Degnon and Fisher called and begged for reinstatement of Morris. Told him he might be used on Section 5, and, in case of an emergency, used on Section 1; this latter, however, to be decided by Mr. Carr's judgment.

Temperature to-day at 9, 12 and 5 o'clock, 60, 66 and 64 degrees respectively. Weather, generally fair.

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WEDNESDAY, OCT. 2, 1901.

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Routine work preparatory to leaving for abroad.

Temperature to-day at 9, 12:30 and 4:45 o'clock, 68, 72 and 66 degrees respectively. Weather, cloudy.

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OCT. 3 to November 6--no diary kept.

Left for Europe morning of Oct. 3, and arrived home October 6.

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THURSDAY, NOVEMBER 7, 1901.

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Rice met me by appointment at the Manhattan Hotel in 42d St. Together we rode down 4th Avenue discussing the work on the way.

In the afternoon, with Carr, walked over the First Division from the City Hall to Astor Place. Found work on Sections 1 and 2 going slow, Fisher stating that they were short of steel on Section 1. Rice informed me that he did not know as to the condition that the steel was in.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 42, 46 and 48 degrees respectively. Weather, clear.

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ADDENDUM, NOV. 7.

Called on Mr. Orr, who informed me that the work in my absence had gone on in a manner satisfactory to him.

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FRIDAY, NOV. 8, 1901.

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Rice and Craven met me at Park Avenue and 41st St. With them walked over Craven's Division. Found very decided progress on all the sub-contracts.

Lunched with Rives, who said, so far as he knew, the work had proceeded satisfactorily.

At 3 attended a joint meeting of the New York & Brooklyn Commission in Brooklyn. Rice was withdrawn from the stand and I was put on in his place. Boardman at the hearing told me

N O V. 8 (Contd.)

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that the Fidelity & Casualty Company were considering Mc Cabe's contract, fearful that hewas going to brak down. I told him that whiskey was thecause of all the trouble, and I did not think it was possible for Mc Cabe to do any better, and I thought that the Company ought to consider carefully whether it would not be better for them to take the work up before it was too late.

Temperature to-day at 9, 12:30 and 5 o'clock, 48, 50 and 48 degrees respectively. Weather, clear.

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SATURDAY, NOV. 9, 1901.

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Routine in the morning at the office. Then Rice and I met Value at 104th St. and went over Value's work south from 160th St.; found the arch at Central Park portal just being closed.

On Mc Bean's work met Mc Bean. This work had developed tremendously during the week. Mc Bean asked that the line be moved 8 inches to the westward; this I declined positively to do.

Temperature to-day at 9 and 12:50 o'clock, 46 and 48 degrees respectively. Weather, clear.

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MONDAY, NOV. 11, 1901.

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Met Rice and Carr at 41st Street and Park Avenue. Went down the two 41st St. headings, and walked over Carr's Division south to 10th St. Found general satisfactory progress.

Temperature to-day at 9, 12:40 and 5:30 o'clock, 36, 44 and 46 degrees respectively. Weather, generally fair and raining in evening.

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TUESDAY, NOV. 12, 1901.

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At 9 o'clock met Rives, Heins & La Farge, Rice, Clarke and Craven at 59th St. Station to discuss the question of Station Decoration. Rives heartily approved of the color scheme and decided that it was a good thing to go ahead at once with the work. Rives and I walked over the work from 62d to 47th St., he being much impressed with the progress.

Bryan and Deyo took luncheon with me and we discussed a number of subjects, the principal one being "track." I told them that I would meet them at their office at any time they wanted to discuss different designs of track and to make the necessary experiments. Deyo regretted that the new form of track had not been laid at Jamaica during our absence.

Temperature to-day at 9, 12:40 and 5:30 o'clock, 36, 44 and 54 degrees respectively. Weather, raining.

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WEDNESDAY, NOV. 13, 1901.

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Heins & La Farge called and discussed with him the 59th St. Station.

Davies called and presented plans for a joint station at Flatbush Avenue and Atlantic Avenue with the Long Island Railroad. Suggested to Davis that, instead of building a loop at Borough Hall, we would build a central switching track which would be cheaper and practically more effective. He said he thought so but would consider it.

Called on Belmont and told Belmont that the work in our absence had progressed satisfactorily. Belmont said he wanted to make another try for a bridge, but I showed him that it was too late to talk for such a thing.

Temperature to-day at 9, 2 and 5:30 o'clock, 32, 38 and 39 degrees respectively. Weather, clear and later cloudy.

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THURSDAY, NOVEMBER 14, 1901.

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Met Rives at 42d Street and walked with him over the work from 43d St. and Broadway to Broome and Elm Sts. He seemed very much pleased with the general progress.

Had a further talk with Boardman in the afternoon in regard to the Fidelity Company and Mc Cabe. Told Boardman that I could not make any certificate which would be sufficient to take the contract away from Mc Cabe, but would suggest that he look into Mc Cabe's financial record and see whether he paid his bills.

Temperature to-day at 9, 12:30 and 5 o'clock, 36, 40 and 39 degrees respectively. Weather, cloudy.

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FRIDAY, NOV. 15, 1901.

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Had a long conference in the afternoon with Shaler in regard to the concrete lining of his tunnel. I told him that, under the contract, I was authorized to order any kind of a lining that I saw fit, either dry packing or solid concrete. I told him I would order solid concrete up to the haunch of the arch, but set back the wall 6 inches so as to give a width of 25 ft. He told me that, under his contract, he was simply paid for the concrete that he put in, and that it made no difference to him except that he thought he ought to be allowed something for the extra excavation outside of the neat line. In the matter of the lining on the timbered section it was agreed that the only way to do was to grout the dry packing that was to be put in.

Craven called in the afternoon and suggested putting in 3-inch I-beams in the roof at 31st and Broadway and build the roof flat instead of arched, so as to give some space at the top for the waterproofing. The depth of the concrete will be about 10 inches. Clarke figured that the concrete treated as a beam at 125 lbs. per square inch would carry 1,000 lbs. distributed per load, which would be the same as the beams themselves would figure. I therefore told Craven to build his roof flat and omit the 3-inch beams.

Temperature to-day at 9, 1 and 5 o'clock, 36, 38 and 38 degrees respectively. Weather, clear.

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SATURDAY, NOV. 16, 1901.

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Routine work in office.

Temperature to-day at 9 and 1:30 o'clock, 38 and 42 degrees respectively. Weather, generally clear.

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MONDAY, NOV. 18, 1901.

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In morning examined the work on 42d Street.

In the afternoon Deyo, Bryan, Gibbs, Clarke and I went to Jamaica to see about the track. Found that they were prepared to put in three sections of track, to be all concrete of bevel block, and a stringer track on ballast. Told them to lay the all-concrete track with tight joints, (and) the bevel block track they were laying with the blocks driven home against the concrete, so as to destroy the adjustability, and were packing the under-stringer on very loose shims. Told Abernathy to take out the shims and lay the whole on concrete..

Temperature to-day at 9, 12:30 and 5:30 o'clock, 38, 42 and 40 degrees respectively. Weather, cloudy.

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TUESDAY, NOV. 19, 1901.

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In the afternoon met Holbrook in his office, and gave permission for putting a stone crusher on Union Square, provided the whole of the crusher was put below the roof of the subway.

Took Mr. Cyrus J. Lawrence and Mr. Miller, with Carr and Shaler, into the east headings at 41st and 34th Sts. to show them how carefully the work was being handled. Mr. Lawrence seemed to be much impressed.

Value called at luncheon and explained the difficulties that he had in waterproofing the tunnel at 160th St. Told him to leave off off waterproofing in the tunnel lining, to cover over the back of the arch with neat cement, and if water was discovered, to leave out either the open drain or dry packing behind the arch.

Saw Mr. Belmont, who said that he wanted the hotel and subway at Park Avenue designed on most economical lines, using steel work in common. Said he would ask Wetmore to call here.

Temperature to-day at 9, 1 and 5 o'clock, 34, 40 and 36 degrees respectively. Weather, clear and cloudy..

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WEDNESDAY, NOV. 20, 1901.

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Met Carr at 12th St. and walked with him from there to Worth St. Found they were carting away material. Ordered Carr to have this material dumped with backfilling at Bleecker St. Notified me later in the day that Degnon had a contract to deliver a certain amount of material- had then been unable to fill a scow for a month. Promised to put other filling in at Bleecker St.

Wickersham and Wetmore called. Explained to them Mr. Belmont's desire. Asked Wickersham whether he expected the City to pay the extra cost of putting in the hotel foundations in addition to the cost of the easement. Said he did not know.

Temperature to-day at 9, 12:20 and 5 o'clock, 30, 34 and 30 degrees respectively. Weather, clear.

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THURSDAY, NOVEMBER 21, 1901.

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This morning walked over the work from 54th to 42d St. Met Wilson on the work at the 50th St. Station. Told him that I wanted all the holes closed up that could possibly be done before winter. Told him that 50th Street was hanging on a decision in regard to the vault lights. Referred him to Deyo.

Temperature to-day at 9, 2 and 5 o'clock, 32, 40 and 42 degrees respectively. Weather, clear.

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FRIDAY, NOVEMBER 22, 1901.

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Spent most of the morning in Mc Donald's office. Talked to Mc Donald and Deyo about Mc Cabe. Mc Donald said he advanced Mc Cabe \$16,000 for this month's pay-roll, and that he did not want to "kill" him. Told him that I thought the work never would get along until Mc Cabe was removed, and that the kindest thing to do was to put a trustworthy man in charge of the work. He said Farrell would do this, but Farrell would want all the profits. Asked me to recommend a man, and I recommended R. C. Hunt. Telegraphed Hunt and asked him if he would take it.

Had a long talk with Deyo and Stillwell in regard to building ducts at 34th St. and Harlem River. Matter referred back to Stillwell.

Temperature to-day at 9, 12:20 and 5:30 o'clock, 36, 40 and 38 degrees respectively. Weather, clear.

FRIDAY, NOV. 22, 1901.

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In the forenoon met Bryan in Mr. Belmont's office and discussed with them the extension north to Van Cortlandt Park on Broadway. Pointed out that the proper thing to do was to make arrangements with the Putnam County Road for interchange of traffic.

In the afternoon went over Craven's work with him from 59th St. Station north to 93d Street.

Temperature to-day at 9, 12:20 and 5:30 o'clock, 36, 40 and 38 degrees respectively. Weather, clear.

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SATURDAY, NOV. 23, 1901.

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In the afternoon went with Value and Klapp over the whole of Value and Klapp's Divisions, except the shafts at 168th and 181st Sts.

Temperature to-day at 9 and 12:30 o'clock, 42 and 40 degrees respectively. Weather, clear and cloudy.

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MONDAY, NOV. 25, 1901.

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Hendrick called in the morning. Explained to him some changes that I wanted made in the sewerage on Broadway and instructed him to call on Loomis to get Loomis' consent. Hendrick informed me subsequently that Loomis approved.

Temperature to-day at 9, 12:30 and 5 o'clock, 40, 42 and 38 degrees respectively. Weather, raining.

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TUESDAY, NOV. 26, 1901.

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In the morning went over part of Carr's Division with Carr. In midday had Shaler, Deyo and Stillwell discussing the question of ducts in the walls at 34th St. Tunnel. Various propositions were made, and the whole matter was referred back to Stillwell for further study.

Had a conference with H. B. Platt in regard to McCabe's work. He authorized me to wire Hunt to come on, and that the

N O V. 26 (Contd.)

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Surety Company would be responsible for the expenses of his trip.

Temperature to-day at 9, 12:30 and 5 o'clock, 32, 28 and 26 degrees respectively. Weather, cloudy and clear.

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WEDNESDAY, NOV. 27, 1901.

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Routine work in morning.

Meeting of Supreme Court Commission in the afternoon.

Temperature to-day at 9, 12:30 and 5 o'clock, 24, 26 and 26 degrees respectively. Weather, clear.

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THURSDAY, NOV. 28, 1901.

Holiday--Thanksgiving.

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FRIDAY, NOVEMBER 29, 1901.

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Routine work.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 26, 30 and 28 degrees respectively. Weather, clear, snowing and cloudy.

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SATURDAY, NOV. 30, 1901.

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Went over Carr's Division as far as 34th St.

Temperature to-day at 9 and 1:30 o'clock, 34 and 36 degrees respectively. Weather, clear.

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MONDAY, DECEMBER 2, 1901.

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This morning Hunt arrived. Suggested to Deyo over the telephone that Hunt had better examine McCabe's work before he met Mc Donald.

Temperature to-day at 9, 1:30 and 5:30 o'clock, 48, 56 and 42 degrees respectively. Weather, clear and cloudy.

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TUESDAY, DECEMBER 3, 1901.

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Took Hunt and introduced him to Mc Donald.

Had a conference with Deyo, Bryan and Stillwell in regard to ducts in Park Avenue between 34th and 41st Sts. Learned from them that they ~~xxxx~~ at last decided that it was feasible to put these ducts between the tracks.

Temperature to-day at 9, 1:30 and 5 o'clock, 48, 36 and 32 degrees respectively. Weather, clear and raining.

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WEDNESDAY, DECEMBER 4, 1901.

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Routine work.

Meeting of the Supreme Court Commission at 2 o'clock.

Temperature to-day at 9, 2:30 and 5:30 o'clock, 18, 22 and 20 degrees respectively. Weather, clear.

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THURSDAY, DECEMBER 5, 1901.

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Walked with Craven over his Division south from 99th St. Discussed chiefly the building of heavy walls at 99th St. and Broadway where the rock was falling, instructing him to prepare sections and submit the same to me.

Meeting of the Brooklyn Commission in the afternoon.

Temperature to-day at 9, 12:20 and 5:30 o'clock, 20, 22 and 20 degrees respectively. Weather, clear.

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FRIDAY, DECEMBER 6, 1901.

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Walked with Carr over his Division from 33d St. south to the Post Office, accompanied by Holbrook, over Holbrook's section. Told Carr and also Holbrook to push ahead with all the concreting as fast as possible in order to get as much street as he could closed in.

Carr pointed out that cracks had developed on the City Hall Loop. I told him that I thought that the radial tracks

were simply shrinkage tracks. The longitudinal crack in the roof was perhaps due to the settling of the sidewalks. I told him to prepare sections showing the position of the sheeting.

In the afternoon sent for Value and told Value to take the cross section of the proposed work on Lenox Avenue to Starrett and ask Starrett if it were not possible to remove the ducts, which Value did, and reported that, after a long conference, Starrett said it could be done as there was only one high-tension cable and that was in the upper westerly corner and which could be temporarily put out of service- that the other cables had sufficient play to allow them to be moved. The fact that the lower tier of ducts was in a wooden box would also facilitate matters.

Hunt called and explained to me the difficulties that he had found existing on McCabe's work, but said that he thought that all matters would be satisfactorily adjusted.

Temperature to-day at 9, 2:30 and 5:30 o'clock, 19, 26 and 21 degrees respectively. Weather, clear.

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SATURDAY, DECEMBER 7, 1901.

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Routine work.

In afternoon walked over Craven's Division from 43d St. to 72d St. Found Bradley and Naughton working all the time. On Bradley's work found the men not ramming the concrete and not putting the mortar over the centres; the concrete was being put in instead very wet. Gave them directions to cover some water-proofing so as not to leave it exposed over Sunday.

Temperature to-day at 9 and 12:30 o'clock, 32 and 36 degrees respectively. Weather, clear.

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MONDAY, DECEMBER 9, 1901.

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Deyo called to discuss the question of ducts and the Lenox Avenue Terminal. These ducts he had proposed to attach to the middle wall of the iron tunnel under the Harlem River. He told me, however, that the railroad people wished to withdraw the plan for further consideration.

In regard to Lenox Avenue Terminal- suggested that property should be utilized for a building, and that I thought that the Rapid Transit Commissioners would object seriously to the cutting of the street. He said that <sup>the</sup> space could not be occupied for buildings and that he did not want that amount of building accommodation.

Saw Belmont at 11 and told him that Robinson had informed

DECEMBER 9 (Contd.)

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me that the Wilson-Adams people would lease the contract at 4%, net, on the purchase price. I told him that I would recommend to the Board the purchase of that portion of the property under which we passed, at a prorated percentage of the total cost, or would recommend to the Board a similar arrangement to 104th St. and Broadway- the value to be judged after the sale of the property on completion of the work.

In the afternoon meeting of Brooklyn Supreme Court Commission. Craven also called in the afternoon, and I pointed out to him the defects which I noted on the work on Saturday afternoon in the lack of ramming the concrete, and directed him also to clear up the street crossings possible, and especially clean the entrance to the Strathmore Apartment House.

Temperature to-day at 9, 12:20 and 5:30 o'clock, 42, 46 and 36 degrees respectively. Weather, clear and cloudy, later

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TUESDAY, DECEMBER 10, 1901.

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Walked down over 42d St. work, and on Carr's Division from 34th St. Pointed out to Carr that increased facilities should be provided at once at 28th St. and 4th Avenue for the accommodation of people getting off the surface cars.

Temperature to-day at 9, 11 and 5:30 o'clock, 44, 44 and 38 degrees respectively. Weather, clear.

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WEDNESDAY, DECEMBER 11, 1901.

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Went over Craven's division and Value's as far as 137th St. on the West and East. On Craven's Division found the concreting of the roof not progressing. Directed Craven to get hold of Bradley and push him; instructed Rice to do the same.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 38, 46 and 40 degrees respectively. Weather, clear.

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THURSDAY, DECEMBER 12, 1901.

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Examined the work of moving the structure at 135th St. on Value's work. Found that the grouting which had been put between the columns and the stone was intact and in perfect condition, showing that, although the grout was thin, it was answering the purpose there. In some cases in removing the structure the jack arches at the side had become detached at the columns and had dropped an inch or more. Directed Value to grout between the arches and the columns in order to restore surface contact.

In the afternoon Deyo called to discuss the estimate, he having included more 48-inch pipe on 42d St. than had been removed. I told him that we would allow the \$40,000 for the "extra" on the new pipe as soon as the water had been turned on, and that we would allow 50 cts. a foot for the removal of



the old pipe as fast as the old pipe was taken up and taken away.

Shaler called and asked that arrangements might be made for giving him the detailed points by which he could set the molds for his concrete.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 39, 44 and 38 degrees respectively. Weather, clear.

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FRIDAY, DECEMBER 13, 1901.

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Over the telephone advised Bryan to appear before the Rapid Transit Commission to urge the closing of Lenox Avenue.

Meeting of the Commission in the afternoon, at which Belmont, Bryan and Deyo appeared. Brought up the question of the closing of Lenox Avenue, and the closing of 12th Avenue at 58th Street. The matter was referred to me for report; the Commissioners, however, appearing to favor both plans, provided it can be shown that Rapid Transit would be benefitted thereby.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 40, 46 and 42 degrees respectively. Weather, clear.

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SATURDAY, DECEMBER 14, 1901.

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Routine work. Discussed extension in Bronx Park with Klapp.

Went over Craven's work in afternoon, and Value's work, including 168th St. shaft, where I met Hunt. I found, as had been reported, that rock at the south end for the 168th St. heading was in bad shape.

Temperature to-day at 9 and 12:30 o'clock, 40 and 58 degrees respectively. Weather, cloudy.

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MONDAY, DECEMBER 16, 1901.

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Routine work.

Summing up before the Brooklyn Commission in the afternoon.

Temperature to-day at 9, 12:30 and 6:30 o'clock, 17, 20 and 18 degrees respectively. Weather, cloudy, afterwards snowing.

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TUESDAY, DECEMBER 17, 1901.

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Went over Value's work in the Bronx and found them putting in the asphalted brick in the Tunnel Section. The bricks were being heated too much, causing the asphalt to be too soft. The Asphalt people suggested the use of some powdered carbonate of lime mixed with the asphalt, which would give it more body. Gave permission to have the experiment tried.

Temperature to-day at 9, 12:30 and 6:30 o'clock, 17, 20 and 18 degrees respectively. Weather, clear.

WEDNESDAY, DECEMBER 18, 1901.

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Routine work.

Peyo called in the afternoon and explained in regard to the desire of his Company to begin work in front of Wanamaker's store. He stated that their Board was very angry with Wanamaker for having gone abroad without having first adjusted the Astor Place property.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 20, 27 and 22 degrees respectively. Weather, clear.

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THURSDAY, DECEMBER 19, 1901.

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Routine work in morning.

Charles Parsons called and discussed the question of trees in the Boulevard. He estimated that if the trees were properly planted, with good loam, the cost would be about \$50 a tree.

Botze of the Sicilian Asphalt Company called and recommended that carbonate of lime be mixed for asphalted brick work to the extent of 65%.

Temperature to-day at 9, 12 and 5:30 o'clock, 20, 22 and 20 degrees respectively. Weather, clear.

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FRIDAY, DECEMBER 20, 1901.

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Walked down over Carr's Division from 33d St. to 10th St. Met Carr. Carr discussed the waterproofing and said he did not think it was safe to lay it below a temperature of 32 degrees, as it would not adhere well to the felt. Took a sample of the waterproofing from 17th St. which was not properly stuck together.

Ogden, of Wanamaker's, called at my request at noon. Told him that I was very much provoked at Mr. Wanamaker's treatment, Ogden expressing his entire surprise, stating that he supposed Mr. Wanamaker informed me he was going abroad. Ogden begged for one week in order to be able to move out of the vaults, stating that he had the hats and coats of 2,000 employes stored there daily. Told him if he would write me a letter promising to move out in one week that I would order that no further material be piled between 9th and 10th Sts., and that I would order the Contractors not to enter the vault. The excavation on 4th Avenue I told him, however, must proceed. I also told him I would give him until Thursday to make up his mind whether he would negotiate for the easement on the property between 8th and 9th Sts. or have it condemned- in the latter case we would simply move in and take possession. He asked that the time be extended to Friday on account of Christmas intervening. Granted.

Called on Baldwin and met him and Davies, and discussed

the Flatbush connection. It was agreed that some connection should be worked out that could be worked with the greatest freedom at all times and avoid congestion.

J. Clarence Davies called in regard to buying the right-of-way from 149th St. to Westchester Avenue.

Temperature to-day at 9:20, 12:20 and 4:30 o'clock, 17, 20 and 24 degrees respectively.

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SATURDAY, DEC. 21, 1901.

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With Rice went over the work from 50th St. north to Fort George on the west-side line. At Fort George met Hunt and Value. Hunt told me that he had made arrangements with the property owners for a dump for his spoil at 5 cts. a yard. Told him to save enough earth so as to make his own fills with earth and not with rock. Told him he could store earth, if he wants it, at the side of the work. Went into the heading at 155th St. and found the rock rather poor. Cautioned Hunt and Value about it.

Temperature to-day at 9 and 12:30 o'clock, 20 and 24 degrees respectively. Weather, clear.

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MONDAY, DEC. 23, 1901.

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Routine work.

Temperature to-day at 9, 12:30 and 4:30 o'clock, 28, 34 and 30 degrees respectively. Weather, cloudy, and raining by 4:30.

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TUESDAY, DEC. 24, 1901.

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Routine work.

Temperature to-day at 9 and 12:30 o'clock, 36 and 42 degrees respectively. Weather, clear.

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WEDNESDAY, DEC. 25, 1901.

Holiday (Christmas).

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THURSDAY, DEC. 26, 1901.

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Mr. Ogden, Mr. Wanamaker, Jr. and Mr. Nevins called in regard to the easement across the Wanamaker property between 8th and 9th Sts. I explained to them the case--which none of them understood--and told them that we would build our

structure strong enough to carry a 20-story building;- that we would arrange to underpin the two buildings at 9th St., and would give them an entrance to the Station, and would consider the building of a separate tunnel or passage-way across 9th St., provided they would give us a free easement. Mr. Wanamaker said he was inclined to accept the proposition, but, on the suggestion of Mr. Ogden, they withdrew for a conference. Aiken in town.

Temperature to-day at 9, 12:30 and 5:30 o'clock, 38, 41 and 43 degrees respectively. Weather, cloudy, and raining by 5:30.

FRIDAY, DEC. 27, 1901.

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In the morning with Deyo, Bryan & Gibbs, and St. John Clarke went to Jamaica to examine the experimental track. Found the Concrete track and the Adjustable Block track in good shape. The Ballast track, however, was, at the end of 2-days service, beginning to show deterioration, the ballast not being packed under the outer part of the block on which the rail rested.

Temperature to-day at 9, 12:30 and 5:15 o' clock, 40, 42 and 42 degrees respectively. Weather, clear.

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SATURDAY, DEC. 28, 1901.

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Walked over Carr's Divisinn from 41st St. to Bleecker St. Went down the shaft at 41st St. where the forms for concrete were being put up. Told Carr that he could build in the timbers carrying the wall plate. At Bleecker St. withdrew permission given last night to remove the street bridge. Told Carr that the roof should be finished either north or south of the Bridge and the traffic diverted around, and the present bridge could be removed and kept removed until the roof was finally finished.

In the afternoon went over the work from 43d St. to 110th St.

Temperature to-day at 9 and 12:30 o'clock, 36 and 40 degrees respectively. Weather, cloudy and later raining.

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MONDAY, DEC. 30, 1901.

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Had a conference with Bryan, Gibbs, Rice and Clarke on the question of cars. They stated that they want to build a car 51 ft. long, five of which they could handle with a 250-ft. platform, and which would give 20 seats more than the standard Manhattan 5-car train. They also stated that they wanted to have the base of rail <sup>raised</sup> 2 inches so as to give the possibility of ballasting track. I stated that, inasmuch as the space would always be filled with concrete if necessary, that I would not argue against it. Made a strong argument in favor of cars without platforms, having either two doors at the quarter or one very large door in the centre.

Temperature to-day at 9, 12:15 and 4:50 o'clock, 38, 40 and 38 degrees respectively. Weather, cloudy, raining and finally clear.

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